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THE GREAT PYRAMID:

ITS HISTORY AND TEACHINGS.

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T. SEPTIMUS MARKS.


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THE GREAT PYRAMID:

ITS

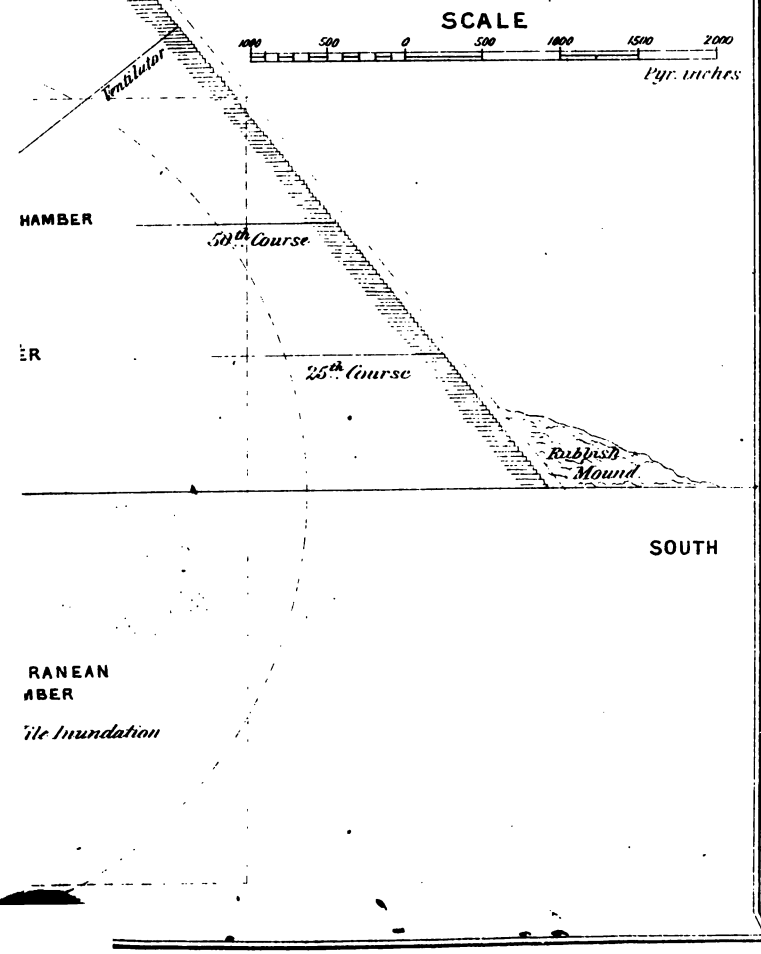
History and Teachings.

VERTICAL SECTION

OF THE

GREAT PYRAMID,

LOOKING EAST.



THE GREAT PYRAMID:

ITS

History and Teachings.

A LECTURE

Delivered to an Association of Christian Young Men, at Hackney, 12th December, 1877,

BY

T. SEPTIMUS MARKS.

WITH A DIAGRAM.

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Whatever profits may arise from the sale of this Lecture will be devoted to the circulation of the Scriptures abroad.

PREFACE.

WITH but little inclination for Egyptological research, it would scarcely have occurred to me that the Great Pyramid would be a profitable subject for consideration, had I not found that it had a history of its own, and lessons to teach, of a peculiarly interesting nature, which marked it as having an origin and character altogether distinct from Egypt. I was reading a work, in 3 vols., by Piazzi Smyth, Astronomer Royal for Scotland, entitled, "Life and Work at the Great Pyramid," to which my attention had been called by Mr. Casey's pamphlet, "Philitis," when I was asked by an Association of Christian young men to give them a lecture. My mind was, at the time, so occupied with the subject before me, that I at once decided to give them the benefit of my study. I found, however, that it was more difficult to master, and put in a clear and connected form, than I at first imagined; and it was equally difficult to condense into the short space of time necessarily occupied in the delivery of a lecture. Here Mr. Smyth's other work, "Our Inheritance in the Great Pyramid," greatly assisted me, and as these are the only reliable text books on the subject for exact measurements and precise description, I have found it advisable, for the sake of correctness, in some of the descriptive and scientific portions, to occasionally borrow his language, or interweave it with my own.

For such as desire a fuller insight into this subject I cannot do better than commend to their notice Mr. Piazzi Smyth's two works to which I have referred, published by Daldy, Isbister, and Co., 56, Ludgate Hill.

The first volume of "Life and Work at the Great Pyramid" contains a most interesting record of his four months' residence on the Pyramid Hill with his wife, and abounds with some very striking features of Arab life. During this time he took the whole of the measurements detailed in the second volume, giving, in the third volume, a summary of the special features he observed, with his comments thereon. In the present edition of "Our Inheritance in the Great Pyramid" he not only gives his own conclusions, but the results of the calculations made by many Pyramid students from his measurements, which, at the time they were taken, he little thought would have afforded so large a field for further inquiry, both scientific and sacred. Both his works are furnished with many diagrams and graphic illustrations of various portions of the building, both inside and out.

The subject is one of intense interest from whichever point of view it may be looked at; and there is such an evident and peculiar connection of all the parts of the Pyramid with each other, and with the heavens and the earth, as to leave no doubt upon an unprejudiced mind that its architect had a deep design and settled purpose in its construction. Whether the Scriptural symbolisms have been rightly apprehended or not, the building certainly affords plenty of scope for parabolic instruction; and as, under the head of "Its Sacred and Prophetic Teachings," I have been led to consider not only the past, but also the present and future dispensations, as revealed in the Word of God, and set forth in this mighty symbol, I am encouraged to hope that, in yielding to the solicitations of many of my friends to have this Paper printed, the perusal of its contents will not be without profit and blessing.

I must, however, here remind my readers that the only revelation God has given to man, and on which we

may rest with unerring certainty, is the Word of God contained in the Holy Scriptures, and whatever speaks not in accordance with that Word should be unhesitatingly rejected. That Word is the test by which everything must be tried, and if the architect of the Great Pyramid were divinely instructed in its erection, we shall find all its teachings to be in accord with the revealed Word of God.

Again, while the heavens declare the glory of God, and the firmament sheweth His handiwork, and the wonders of creation around us manifest His eternal power and Godhead, the Word of God alone points out clearly and unmistakably the utter ruin and depravity of our nature, and the remedy provided by God in the gift of His Son for our salvation.

That same Word declares that the second coming of the Lord draweth nigh, and surely everything betokens His near approach. It will be to the world as sudden and unexpected as was the flood in the days of Noah, and many a couple that will then be working together in the field or at the mill, or at rest in one bed, will be suddenly separated; the one shall be taken and the other left. The Lord Jesus will then, according to His promise, gather His saints to Himself, and when His shout of joy rends the air, "the *dead in Christ* shall rise first; then we which are alive and remain (the living saints) shall be caught up together with them in the clouds to meet the Lord in the air; and so shall we ever be with the Lord" (1 Thess. iv. 16, 17). "Watch, therefore, for ye know not what hour your Lord doth come." "Blessed are those servants whom the Lord when He cometh shall find watching."

Having thus secured His redeemed, He will, accompanied by them, "be revealed from Heaven with His mighty angels, in flaming fire, taking vengeance on them that know not God, and that obey not the gospel

of our Lord Jesus Christ, who shall be punished with everlasting destruction from the presence of the Lord, and from the glory of His power" (2 Thess. i. 7-9).

From that fearful wrath there is but one way of escape—a way provided by God Himself, who is "not willing that any should perish, but that all should come to repentance" or change of mind. He *so* loved the world, that, when He saw us all utterly ruined and undone, He gave His only begotten Son to die, the just for the unjust; and that He might be a *just* God as well as a Saviour, He caused the iniquities of us all to meet on Him, dealing with Him after our sins, and rewarding Him according to our iniquities; that *whosoever* believeth on Him should not perish, but have everlasting life. Thus has the divine Substitute, the Lord Jesus Christ, met all the claims of a holy God. "Neither is there salvation in any other, for there is none other name under heaven given among men whereby we must be saved." "He that believeth on the Son hath everlasting life; and He that believeth not the Son, shall not see life; but the wrath of God abideth on Him" (Acts iv. 12; John iii. 36).

These are the true sayings of God; and whatever views may be entertained of the Great Pyramid and its lessons, this Word of our God—which tells us of our condition and danger, which points us to the perfect security and everlasting strength of the Rock of Ages, and warns us not to neglect so great salvation—shall stand for ever. If, however, we do find in the stones of the Great Pyramid a parable of these and other kindred truths, and a substantial portraiture of the house which fell not because it was founded upon a rock, leading us to seek for a solution of its meaning in the Word of God, the consideration of our subject will not have been in vain.

October, 1879.

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A TABLE

SHOWING SOME OF THE PRINCIPAL MEASUREMENTS, &c., OF THE GREAT PYRAMID.

1 Pyramid inch = 1·001 British inch = $\frac{1}{500,000,000}$ of earth's polar diameter.

25 Pyramid inches = 25·025 British inches = 1 sacred or pyramid cubit.

Original base-side length of Pyramid = 9131·05 pyramid inches; 9131·05 ÷ 25 = 365·242, &c., length in days of solar year.

Original length of the two diagonals of base = 25,827 pyramid inches; 25,827 in an inch to a year = number of years occupied in the precession of the equinoxes.

Original vertical height of Pyramid = 5813 pyramid inches; 5813 pyramid inches × 10^9 = 91,840,000 British miles; distance of sun from the earth.

As 5813 : 9131 × 2 : : 1 : 3·14159, &c., or the proportion of the diameter of a circle to its circumference.

1 Pyramid pound weight = 1·028 of the British pound avoirdupois = weight of 5 cubic pyramid inches of earth's mean density.

1 Pyramid pint measure = 0·987 of the old British wine pint = 1 pyramid pound or 5 × 5·7 cubic pyramid inches of water at temperature of 50° pyramid.

Temperature of King's Chamber 50° pyramid = 68° Fahrenheit = $\frac{1}{5}$ between freezing and boiling points of water; mean temperature of all lands; most suitable for health of man.

Length of descending passage to its intersection by floor of first ascending passage = 985 pyramid inches = in an inch to a year, period from the Flood to Moses.

Length of first ascending passage = 1542 pyramid inches = in an inch to a year, the Hebrew dispensation from Moses to Christ.

Length of Grand Gallery = 1881·4 pyramid inches = ?

Pyramid's own memorial date of foundation, 2170 B.C.

THE GREAT PYRAMID:

ITS HISTORY AND TEACHINGS.

I.—ITS HISTORY.

THE early history of Egypt is involved in such a cloud of mystery as to make it exceedingly difficult to unravel the origin of the remarkable people who there founded the oldest and most enduring kingdom that the world ever saw; and yet, in order to investigate our subject, it is necessary to enquire who these people were, and from whence they originally came.

Their chronology affords no data for ascertaining the period when they first emerged, suddenly, and apparently without a period of preparation, into a kingdom; for the different systems of reckoning employed by them, the shortness of their years, and the national custom of dating in kings' reigns only, without the use of the controlling date of any cycle, renders the subject exceedingly obscure. From their monumental history it seems evident that from their very first settlement in the country they were possessed of the arts of civilisation, which they must have brought with them from elsewhere; and if we had only profane history to guide us, we might easily be led into a belief of some of the theories that

place the beginning of Egypt as a nation from 5,000 to 20,000 years before Christ. But happily we have before us the Word of the living God, the only trustworthy account of the history of the world, the only reliable source from whence to learn from a divine standpoint the origin of nations.

After the enumeration in Genesis x. of "the families of the sons of Noah, after their generations, in their nations" it is recorded that "by these were the nations divided in the earth after the flood." But before their division we read, "the whole earth was of one language and of one speech," dwelling in the plain of Shinar. Here they impiously set themselves to build a city and tower whose top might reach to heaven, and, said they, "Let us make us a name, lest we be scattered abroad upon the face of the whole earth." "And they had brick for stone and slime had they for mortar," the very opposites of the materials subsequently employed in rearing the Great Pyramid. The history is familiar to us all; the Lord Himself came down, confounded their language, and "scattered them abroad from thence upon the face of all the earth;" each company separated from the other by another speech and language, and driven forth as by an unseen power, north, south, east, and west, to be guided to their final resting-place by the same hand that impelled them onwards.

Thus their defiance of Heaven was for the time frustrated, and although but the rubbish mounds of that mighty tower now remain to bear witness of their intention, the time is not far distant when another effort will be made to rebuild a central monarchy on perhaps the same spot, for the purpose of bringing all nations into a confederacy or brotherhood without God, and then, for the last time, Babylon shall be overthrown and sink as

lead in the mighty waters, and the enduring kingdom of the Son of God be established on this earth.

Among the companies that went forth from Shinar were the children of Mizraim, one of the sons of Ham, who seem at once to have established themselves in Egypt, and in a very short period of time to have forgotten God, and fallen into the bestial worship of which all their monuments and records testify. For between 300 and 400 years there is but little trustworthy information as to their history, but with the fourth Memphite dynasty, the history of Egypt begins to assume greater importance. The first monarch of this line was Senefru or Soris, and it was in the reign of his successor, Khufu, Suphis or Cheops, as he is variously called, that the Great Pyramid of Egypt was built, the oldest and most enduring building ever erected.

Herodotus is the first to give us any detailed account respecting this wonderful building, and he procured his information from an Egyptian priest about 1,725 years after the erection of the Pyramid, and 445 years before the Christian era, according to whom "Cheops on ascending the throne plunged into all manner of wickedness. He closed the temples, and forbade the Egyptians to offer sacrifice to their gods, compelling them instead to labour one and all in his service, viz—in building the Great Pyramid. He reigned 50 years, and was succeeded by his brother Chephren, who imitated the conduct of his predecessor, built a Pyramid, but smaller than his brother's, called the Second Pyramid, and reigned 56 years. Thus, during 106 years, the temples were shut and never opened. The Egyptians so detest the memory of these kings that they do not like even to mention their names. Hence they commonly call the Pyramids (the Great and the Second) after Philition (or Philitis), a

shepherd, who at that time fed his flock about that place."

Manetho, too, the celebrated Egyptian historian, thus writes:—"We had formerly a king whose name was Timeus. In his time it came to pass, I know not how, that God was displeased with us; and there came up from the east, in a strange manner, men of an ignoble race, who had the confidence to invade our country, and who easily subdued it by their power without a battle. All this invading nation was styled Hyksos, that is, shepherd kings."

It would seem therefore that this shepherd-prince, Philitis, coming from Arabia or Palestine, was probably the architect of the Great Pyramid, and that he was enabled to exert such an amount of mental control over King Cheops, possibly by some spiritual influence in connection with the service of the only true God, as to induce him to shut up the idolatrous temples and compel his subjects to labour in the erection of this wonderful building, destined to be an enduring witness of truths, unknown to them then, but to be brought to light when the necessity for them in the purpose of God should arise. It is on record that, while, as we have seen, the Egyptians hated, they implicitly obeyed, the power that made them work on the Great Pyramid, and it may be that the traditions of this forced conscription got mixed up afterwards in the minds of later Egyptians with the evils inflicted on their country by the subsequent shepherds of the 15th to 17th dynasties, and thus made the name of a shepherd an abomination to the Egyptians. The statement of the Egyptian priest to Herodotus, that Cheops plunged into all manner of wickedness, may be explained by his having overturned the national religion, under the influence of Philitis, and substituted probably

for the time the more simple worship of God; but as the natural heart of man has ever the same downward tendencies, no sooner was the restraint removed than they returned with fresh zest to their idolatrous practices.

For 30 years, according to Herodotus, 100,000 men are said to have been employed in the construction of the Great Pyramid, and at the end of this time, Philitis, and his people "to the number of not less than 240,000, quitted Egypt by capitulation with all their families and effects, and proceeded to Judæa, and built there," says Manetho, "a city of sufficient size to contain this multitude of men, and named it Jerusalem."

If, therefore, Philitis built Jerusalem after executing his colossal work in the erection of the Great Pyramid from 2170 to 2140 B.C., he must have been a contemporary of, but much older than, the patriarch Abraham, whose birth we suppose to have taken place about the time the Pyramid was commenced. Bearing this in mind, we find that about 50 years after the completion of the Pyramid, the King of Salem, or Jerusalem as it was afterwards called, was a very remarkable person, who blessed Abraham and to whom Abraham gave tithes, who was priest as well as king; in short that mysterious royal character, Melchizedek, which is evidently his typical and not his proper name; "he being first by interpretation King of Righteousness, and after that also King of Salem, which is King of Peace," but of whose birth and death under that name no record is given. It is therefore highly probable that Philitis and Melchizedek were the same person.

If it be further asked, who then was Melchizedek? the answer may be given, that many circumstances and authorities combine to show that he could have been no other than the patriarch Shem. Our time will not allow

us to enter upon this subject further than to say, that as the head of his tribe or family, the father of the race in which Abraham was born, he would be, as was the custom in patriarchal times, the priest of the family, and would naturally also be the dispenser of justice, and the arbiter of peace amongst his descendants; hence his titles, King of Justice and King of Peace. This will account for the way in which he meets Abraham, giving him the patriarchal blessing, bringing forth the bread and wine for his refreshment, and receiving from him the homage due to so exalted a personage. This portion of the subject is, however, fully discussed by Calmet in his Dictionary (*art.* Melchizedek), to which I must refer you for further particulars.

If, then, Philitis, Melchizedek, and Shem were one and the same person, we can the better understand how, having been engaged with his father, under divine instruction, in the building of the Ark, the architect of the Great Pyramid should have entrusted to him the scientific and other teachings embodied in that wonderful structure, the marvellous features of which we shall presently proceed to consider.

Before doing so, however, it may be well here briefly to allude to the *other* pyramids, the grander specimens of which, thirty-seven in number, stretch for some fifty miles along the western or African side of the Nile Valley. There can be no doubt that the greater number, if not the whole of these, were built by the Egyptians as sepulchres for their great dead, and that in the erection of them they endeavoured to imitate as well as they could, the more ordinary mechanical features of the great work on which they had been so long employed; but in none of them do we find any ascending passages or upper chambers as in the Great Pyramid, nor do any

of them exhibit that nicety of proportion and exactness of measurement which characterize the parent work.

While, too, in most of the other pyramids there can be traced some reference in hieroglyphic or pictorial adornment to the idolatry of Egypt, there is not throughout the whole of the Great Pyramid a single vestige of heathenism, both the exterior and interior being absolutely free from all engraved or sculptured work, as well as from everything relating to idolatry, or hieroglyphics of any kind, with the exception of some quarry marks of the workmen, that were discovered in the excavations made by Col. Howard Vyse, on some of the interior masonry never intended to be seen.

The Great Pyramid, the northernmost of all the rest, forms one of a group of nine stone pyramids, standing on the levelled crest of the hill of Jeezeh or Gizèh, in view of the ancient Memphis, and not far from Cairo. Of these, two were built very shortly after the erection of the first, and exhibit much of the constructive skill and mechanical ability of the Egyptians, but without that perfection of finish, nor, so far as can be ascertained, the scientific teaching embodied in the first, which, as Professor Smyth says, "transcends in value all the rest, and stands out distinct and distinguished from all its fellows by its giant size, its wondrous internal structure, its superior age, more frequent historical notice, and yet the hitherto inscrutable destiny of its purpose; the greatest of the seven old wonders of the world in the days of the Greeks, and the only one of them all which is still in existence on the surface of the earth."

Here, then, at the apex of the Delta, the architect of this great monument chose the site for his stupendous work—a building whose base covers over thirteen square acres of the levelled solid rock on which it is founded,

and which alone could have borne, through all the vicissitudes of storms and earthquakes, this mountain of masonry, computed to contain five million tons of huge squared stones. Its four corner stones were let into sockets cut sharp down into the living rock, into and upon which it was so built as to make the building and its rock-bed foundation one. Its four sides face exactly the four cardinal points of the heavens. It stands, as has been demonstrated by Professor Smyth, on a meridian and in a latitude (30°) in which there is more earth and less sea than any other, and is in the geographical centre of the land surface of the whole world; while, being the centre of an arc which sweeps the Delta of Lower Egypt, it is in the centre, and, at the same time, at the border of the sector-shaped land of Egypt (Isaiah xix. 19). It is the oldest, largest, highest, and most substantial stone monument ever erected by the hands of man, and may be said to be a pure and perfect pyramid, whose height is to its perimeter as the radius of a circle to its circumference.

For ten years, it is said, the builders were occupied "in making a great causeway from the Nile bank to the Pyramid hill, over which were drawn or moved to their final position, the huge masses of squared stone that had been rafted down the river from their distant southern quarries" (some of which, the quarries of Syene, were 500 miles distant), and during the succeeding 20 years, 100,000 men were employed in the construction of the monument.

It is probable, as a member of the craft has urged, that Freemasonry owes its origin to the erection of the Pyramid; their peculiar signs—sun, moon, compasses, square, triangle, &c.—all having a reference to the characteristics of the building, its base being the per-

fect square, its side the sacred triangle, and so on. It is further supposed that the Egyptians were engaged on the great mass of the building, but were barred from the secret chambers and ascending passages, which were wrought only by the initiated, who came with Philitis, and who were sworn to secrecy. If this be so, it may account for the Egyptians knowing nothing of the ascending passages or upper chambers, and for the absence of such in all the later Pyramids. It is not, however, my province to give an opinion on this point, but I record it as not without interest in connection with our subject.

As in giving a description of the building I shall have to deal with measurements, I may here mention that the standard of measure used by the architect appears to have been an inch, just one-thousandth part longer than the British inch; twenty-five of these inches being the cubit, a measure probably identical in length with that previously used by Noah in building the Ark, and afterwards divinely dictated to Moses for the Tabernacle and its furniture; and to Solomon for the construction of the Temple on Mount Moriah, and about which I shall have something further to say presently.

The original vertical height of the building was 485 feet (or 5,813 pyramid inches), and the measure of each of its sides 762 feet (or 9,131 pyramid inches). It was cased when completed with blocks of smooth, white limestone, almost like marble, in a sloping plane; exhibiting matchless workmanship, marvellously correct and true, the blocks having a height of nearly 5 feet, a breadth of 8 feet, and a length perhaps of 12 feet, joined together with a film of white cement no thicker than a sheet of silver paper; the whole rising at an angle of 51° 51′ 14·3″; every one of the measurements and

angles, as we shall presently see, carrying with them astronomical and scientific teaching of the utmost import.

A spectator would thus have before him a vast shadowless monument, reflecting from its pure white and polished sides the sparkling rays of an Egyptian sun; and so, for 3,000 years or thereabouts, it presented this outward aspect of simple truth and beauty to the world, the general tradition being that it was built to contain in its subterranean chamber the body of King Cheops. This, however, could not have been the case, as Herodotus observes that, in consequence of the people being exasperated against him, by reason of the toilsomeness of the works, they threatened to tear in pieces his dead body, whereupon he commanded his friends to bury him in an obscure place, and he was accordingly buried in a sepulchral chamber near the Pyramid, in a spot insulated by trenches, introducing the waters of the Nile; and this must have been more than 50 feet lower than the very bottom of even the unfinished subterranean chamber, the deepest work found yet underneath the Great Pyramid.

The entrance to the Pyramid was through a long, inclined, descending passage trending down from the north, and entered at a point about 49 feet above the ground, near the middle of the northern side. This passage was of very small bore being only about 41 inches in width and 47 inches in transverse height, descending at an angle of 26° 18′ and having a length of nearly 370 feet (or a little over 4,400 pyramid inches), ending in a subterranean, excavated, rock chamber about 100 feet vertically under the centre of the base of the whole monument. "This subterranean chamber *had* been begun to be carved out deep in the heart of the

rock with admirable skill. For the workmen having cut their way down to the necessary depth by the passage, commenced with the chamber's ceiling, making it exquisitely smooth, though 46 feet long by 28 feet broad; then sinking down the walls therefrom in vertical planes, there was every promise of their having presently, at that 100 foot depth, inside the otherwise solid limestone mountain, a rectangular hollow or chamber, whose walls, ceiling, and *floor*, should all be perfect pattern planes. But when they had cut downwards from the ceiling to a depth of about 4 feet at the west end, and 13 feet at the east end, they stopped in the very midst of their work. A very small bored passage was pushed on into the rock merely a few feet further towards the south, and then that was also left unfinished; a similar abortive attempt was likewise made downwards; and the whole floor from one end of the chamber to the other, was left thus a lamentable scene of up-and-down and fragmentary confusion,"* verily as it were the true locality of the "stones of darkness and the shadow death" (Job xxviii. 3).

It would appear from the descriptions given by Herodotus, Strabo, and Pliny, that access was gained to the descending passage by the sliding of a certain removable stone at its entrance, and through this, at rare intervals, did those whose curiosity prompted them, pass, as is evident from the fact that M. Caviglia found in 1820 good blackened Roman letters on the roof of the subterranean chamber, as if some ancient Roman had used his lamp to memorialize his visit to the place.

This then was all that was known of the interior of the Pyramid up to about 1,000 years ago; for after the

* "Our Inheritance in the Great Pyramid."—Piazzi Smyth.

classic came the dark ages, the entrance into the Pyramid was forgotten, its secret lost, and there only hung about it a traditional halo, an indistinct idea, that within what was supposed to be this royal tomb of King Cheops, there was untold wealth.

After the conquest of Egypt by the Saracens in the 7th century, and when the Turks had begun to settle down as a somewhat civilized people, there came in A.D. 820, the Caliph Al Mamoun, "a Caliph with an enquiring turn of mind, like his father, Haroun Alraschid, of the 'Arabian Nights,'" says Mr. Piazzi Smyth, from whose interesting work, "Our Inheritance in the Great Pyramid," I have gathered the following particulars of this Caliph's forced entry into the Pyramid. When he desired to enter the building, he found no one who could give him any reliable information, but had only an indistinct rumour to guide him towards trying the northern rather than any other side of the monument. Accustomed to the gratification of his every wish, and with the most astonishing accounts of the contents of the three Pyramids of Jeezeh, which were said to be filled with treasures of gold, silver, and precious stones, with instruments of iron and vessels of earth, with arms which rust not, with glass that might be bended and yet not broken, and all kinds of exciting wonders, such as could be only imagined by a people believing seriously in enchantments and genii, Al Mamoun determined to force the building of the Great Pyramid to disclose to him its secrets, and so he directed his Mahommedan workmen to begin near the base of the middle of the northern side, while the real entrance was about 25 feet away to the east. Weeks and months were consumed in their toilsome exertions, when, having penetrated about 100 feet in depth from the entrance, it was remembered that

an old king had found, on making a calculation, that all the wealth of Egypt in his time would not enable him to destroy one of the Pyramids.

But one day when the murmuring disciples of the false Prophet, being thoroughly exhausted by their apparently fruitless labour, were almost becoming openly rebellious, "they heard a great stone evidently fall in some hollow space, within no more than a few feet on one side of them! Energetically, they instantly pushed on in the direction of the strange noise; hammers, and fire, and vinegar being employed, again and again, until breaking through a wall surface, they burst into the hollow way of the descending passage, 'exceeding dark, dreadful to look at, and difficult to pass,' as they said." Here was exposed what Greeks and Romans, Persians and Egyptians never saw; for the falling of that stone revealed the chief leading secret of the building, for the first time since its erection. "This large angular fitting stone that had made for ages, with its lower flat side, a smooth and polished portion of the ceiling of the inclined and narrow entrance-passage, quite undistinguishable from any other part of the whole of its line, had now dropped on to the floor before their eyes; and revealed that there was, just behind it, or at and in that point of the ceiling which it had covered, the end of another passage, clearly ascending therefrom and towards the south, out of this descending one. . . . But that ascending passage itself was still closed by an adamantine portcullis, or rather stopper, formed by a series of huge granite plugs of square wedge-like shape, dropped or slided down and then jammed in immovably from above. To break them in pieces within the confined entrance-passage space, was quite out of the question, so the grim crew of Saracen Mussulmans broke away side-

ways or roundabout to the west, through the smaller ordinary masonry (by a huge chasm still used by all who enter into the further interior) to the newly-discovered ascending passage, at a point past the terrific hardness of its lower granite obstruction." Still they found the passage-way blocked, but the filling material at that part was only limestone. "But as fast as they broke up and pulled out the pieces of one of the blocks, other blocks above it, also of a bore just to fill its full dimensions, slided down from above." Nothing, however, would daunt the "Commander of the Faithful," and so stone after stone was broken bit by bit to little pieces, until the passage just above the granite portcullis was found to be free from obstruction.

The treasures of the Great Pyramid, so long sealed up, appeared now to lay full in their grasp before them. Thirsting for the promised wealth, on they went, up no less than 110 feet of the steep incline (which, with the length of the granite portcullis, makes the length of this passage from its commencement 1,542 pyramid inches) on their hands and knees, through a passage of smooth white limestone resembling marble, but only 47 inches in transverse height, and 41 inches in breadth, until they suddenly emerged into a long, tall gallery, now called the Grand Gallery, of seven times the passage height, or about 28 feet, the walls on either side being composed of seven courses of stone, overlapping each other. All was black as night, the gallery still ascending at the strange, steep angle of 26° 18′ (the same angle as the descending passage), and leading them up and away further "into the very inmost heart of darkness of this imprisoning mountain of stone."

In front of them, on first entering this Grand Gallery, but on the level, they saw another low, narrow, *horizontal*

passage, passing under the inclined plane of the Grand Gallery, and leading to what is now called the Queen's Chamber; while on their right hand, nearly 3 feet from the entrance of the gallery, is a black, ominous-looking well's mouth, more than 140 feet deep, leading down first to a natural grotto in the rock, and then to the lowest part of the descending entrance-passage, near to the subterranean chamber.

The way up the Grand Gallery was still narrow, for although the width of this lofty hall is 82 inches, or nearly 7 feet, there is on each side a bench, or ramp, of the same marble-like stone, about 21 inches high and 20 inches wide, leaving only a passage-way to walk in of 41 inches. Upon the top of these benches, near the angle where they join with the wall, are spaces or holes cut in the stone, varying from 19 to 24 inches long, about 6 inches broad, and from 7 to 11 inches deep, and of these ramp holes there are 28 on either side; all, except the lowest two and upper one of which, are distinguished by a piece of stone, 13 inches broad and 18 high, being let into the wall vertically and immediately over them, 24 of these being crossed slantingly by a broad, transverse, shallow groove, measuring about 22 inches long, 12 broad, and 1 deep.

Up this long ascending floor-line then, for about 150 feet more, they had to push their dangerous and slippery way; then near the top, a step 3 feet high landed them on even ground once more; and a short distance further on (the total length of the Grand Gallery being 1881·4 pyramid inches) they encountered a very low short passage, bringing them into what is termed the Antechamber, which is, roughly, nearly 10 feet long, 12 feet 6 inches high, and about 5 feet 6 inches in width. Here again they had to creep under a hanging portcullis of

granite, then through another low doorway, in large blocks of solid red granite, 100 inches long, when they stood upright without further hindrance in the Grand Chamber, now called the King's Chamber, "which was, and is still, the conclusion of everything forming the Great Pyramid's interior; the chamber to which, and for which, and towards which, the whole Great Pyramid was built. A right noble apartment, roughly, 34 feet long, 17 feet broad, and 19 feet high, of polished red granite throughout, both walls, floor, and ceiling, in blocks squared and true, and put together with such exquisite skill" that the point of a penknife could not be made to penetrate the joints, nor could anything be desired more solidly noble and refined. But where is the promised treasure? What do they find there? Only an empty granite chest or coffer without a lid! And so to stop their murmurings and threatenings, the Caliph had a large sum secretly brought from his treasury, and buried by night in a certain spot near the end of his own quarried entrance hole, where, being caused to dig just there, they found to their surprise this golden treasure, which, when they counted, amounted to just sufficient to cover the expenses incurred in the undertaking.

Many years after this, there began that despoiling of its outside which was carried on by many generations of Egyptian viceroys systematically, until all the white and polished blocks of the casing (except the two which Col. Howard Vyse was to bring to light 1,000 years afterwards) had been removed for the building of Cairo and other new Mussulman cities.

With its beauty thus marred, and its top stone and chief corner-stone gone, this emblem of truth still retained all its solidity, its courses of stonework having

been so exquisitely fitted and cemented together as to defy all ordinary efforts of demolition, thus putting it out of the power of any one, except at enormous expense, to do it further harm.

In the year 1638 John Greaves, afterwards Professor of Astronomy at Oxford, visited the Pyramids in the course of his travels. The Great Pyramid especially attracted his attention, and he made a minute examination of it, taking careful measurements of the whole of its passages and chambers, and describing methodically its excellencies of construction, "the smoothness and evenness of the work, the close knitting of the joints," and the extreme accuracy with which the height and breadth of the several passages is kept up through their entire length. "The structure of it," says he, "hath been the labour of an exquisite hand;" while more than once he hints his belief that some hidden truths were contained in its many remarkable features. It was from his measures that Sir Isaac Newton deduced a value for the sacred cubit, which we shall presently see was a close approximation to what has since been shown to be its probably exact length.

The next systematic and more detailed measurement of the Pyramid was instituted by Buonaparte when in occupation of Egypt in 1798, and the precise measurements then taken of every part of the building, by his corps of *savants*, have a special value as affording independent evidence on the subject.

Subsequently in 1837 the energetic Col. Howard Vyse spent £10,000 in exploring it, afterwards publishing its history, and giving from his own measurements and explorations the most full and exact particulars of pyramid facts that had up to that time been ascertained. It was in answer to a letter from him, on his return from

his exploration in 1838, that Sir John Herschel pointed out that the angle of the entrance passage had a special astronomical meaning, and was evidently intended to indicate the date of the Pyramid's erection as being the year 2170 B.C., when at midnight of the autumnal equinox this passage pointed directly to the then Polar Star α Draconis, which was on the meridian below the Pole and at the particular distance from the Pole of 3° 42′, indicated by the entrance-passage. This has since then been confirmed by the Astronomer Royal for Scotland, who, in endeavouring to find the reason why the Pyramid architect made the entrance-passage to point to α Draconis at its lower or less important culmination only, made the further discovery that a more important star for chronology, Alcyone, the chief star in the Pleiades group, was at the same instant at its upper culmination crossing the meridian above the Pole, coincidently with the vernal equinoctial point.

This was the first ray of light as to the use and meaning of this vast structure, and it presently began to be asked, if one astronomical truth were here set forth, why not many; and, why not geometrical, geographical, metrological, and other kindred teachings? But it was reserved for the late Mr. John Taylor, the publisher to the London University, in Gower Street, in the year 1859, by means of his book, "The Great Pyramid: Why was it Built, and Who Built it?" to suggest, after 30 years' study of all accessible data, "that that greatest piece of architectural antiquity on the earth was built according to a plan furnished by Divine inspiration, even as the Pentateuch, 800 years afterwards, was written by the same supernatural help." The general public were not a little startled by this remarkable announcement, and naturally enough received it with

some amount of disfavour; but Mr. Taylor, although advanced in years, persevered in his researches, and in January, 1864, added a smaller pamphlet on the subject of linear measure in connection with the ancient standards, shortly after which he died at the age of 84. With almost his last breath he emphatically confided the subject that had for years occupied his attention, to Mr. Piazzi Smyth, the Astronomer Royal for Scotland, who, during the last few months of his life, had been in close correspondence with him upon it.

In the same year Mr. Smyth published the first edition of his work, entitled "Our Inheritance in the Great Pyramid," which was written with the disadvantage of having no very certain measurements on which to depend.

Finding that nothing short of practical examination and instrumental measure on the spot could effectually solve the problem confided to him, Mr. Smyth, with thorough devotion to the cause he had espoused, determined to proceed to Egypt, and in spite of many obstacles and difficulties in his way, he set sail for the land of the Pharaohs, accompanied by his wife, in November, 1864, provided with the best instruments that the most advanced skill could produce. Here, during a four months' residence on the Great Pyramid hill, during which he worked oftentimes by night as well as by day, he succeeded in obtaining the most complete and minute set of measurements and scientific observations that in all probability have ever been taken in connection with any other building, and these were given to the world, in 1867, in his three volumes of "Life and Work at the Great Pyramid."

Since then, the sacred theory has been remarkably confirmed and extended, and the measurements taken

by Mr. Smyth in 1864, "though," as he says, "in total ignorance at the time of any theoretical importance attachable to them," have served as the basis for the calculations of Pyramid students all over the world; many of the results of their independent discoveries being found in the third edition of "Our Inheritance in the Great Pyramid," published in September, 1877.

Thus it will be seen that these measurements, which are open to the criticism of all enquirers, could not have been made to suit the theories and teachings that have since been and are still being evolved from them, which we now proceed to consider.

II.—ITS SCIENTIFIC TEACHINGS.

THE word pyramid, which Herodotus was the first to make use of, is supposed to be derived either from the Greek πυρος—wheat, and μετρον—measure; or else from the Coptic (which is more probable), *pyr*—division, and *met*—ten. Either of these derivations may well serve to illustrate its purpose, as, by line and angle, in number, weight and measure (MENE, TEKEL, PERES), are all its truths set forth.

This fact alone may well, at the outset, arrest our attention as being so unlike the works of man. Here are no written characters to explain the meaning of this mountainous mass of masonry; yet never did stones, and only stones, teach before such a lesson—a lesson only to be learnt as we learn the wonderful works of God in the Creation around us, by painstaking and persevering study. As, too, when we analyse the works of God, we find the greatest wonders lie hidden beneath the surface out of sight, until "sought out of

them that have pleasure therein," and brought to light; so with this remarkable building, its richest truths were hidden, as the kernel in the shell, in the deep recesses of its sealed-up passages and chambers, until, at the appointed time, it has been made to disclose its secrets and bring to light its hidden truths.

The first propounded theorem of Mr. Taylor, with regard to the Great Pyramid's shape, is that the vertical height of the monument *in its original condition*, was to twice the breadth of its square base, *as the diameter to the circumference of a circle, i.e.*, as 5813 : 9131×2 :: 1 : 3·14159, &c.—or, that the sum of the measured four sides of its base bore the same relation to its vertical height that the circumference of a circle bears to its radius.

"Now this," says Mr. Piazzi Smyth, "is neither more nor less than the celebrated practical problem of the mediæval and modern ages of Europe, commonly known as the squaring of the circle; and the thing was thus practically done, truly and properly at the Great Pyramid, thousands of years before; for it was accomplished by the architect who designed that Pyramid, when, over and above deciding that the building was to be a square based pyramid, he also ordained that its height, which *ascending at another angle, might have been anything*, was to bear such a particular proportion to the breadth of its base as should bring out the nearest possible value of what is expressed in mathematics by the symbol of the Greek letter π (pi), or the proportion of the diameter of a circle to its circumference. This, as is well known, can only be expressed in figures by an interminable fraction as before stated, viz., 1 : 3·14159, &c.

"If, therefore, this quantity is really found built into the Great Pyramid with exactness as well as magnitude,

characterizing the *whole* of that vast mass, it must have been the result either of some most marvellous accident or of some deep wisdom and settled determined purpose, not less, too, than 3,000 years in advance of the learned world in the building's own time.

"Of the scientific value of this quantity there is, and can be, in the present day, no doubt in any school or university all the world over; for experience has shown that neither mathematics nor mechanics can progress in any country in modern times without knowing well the numerical value and calculational quantity of π."

But John Taylor had only the comparatively incomplete measures of Howard Vyse and others, to guide him, and these, too, expressed in British inches, which, although approximating to correctness, had yet to be tested. When, however, they were tested by the Astronomer Royal of Scotland, as shown by his carefully recorded measurements of every part of the building, inside and out, there was so eminent a confirmation of the truth of Mr. Taylor's theory as to leave no doubt of its correctness.

Before, however, proceeding further, the question naturally arises, what standard of measure did the architect of the Pyramid use in planning and erecting his lasting monument? as upon a correct answer to this question depend the greater part of the Pyramid's lessons.

The profane cubit of Egypt was 20·68 inches, as was also that of Babylon and Nineveh, and this profane cubit was always used by those countries who through all history are found arrayed in religion against Israel and against Israel's God. We can scarcely therefore expect that such a standard of measure would be used in the erection of a building of such a character as the Great Pyramid. The length of the sacred, or Hebrew,

cubit is not accurately known, but Sir Isaac Newton, in his dissertation on cubits, arrives at the conclusion, after much study, that the sacred cubit is either 24 inches with a large fraction or 25 inches with a small fraction, and this would appear to be confirmed by the Prophet Ezekiel, who, writing his prophecy in the land of the Chaldeans where the profane cubit would be in use, has distinctly revealed to him (chap. xliii. 13) that the cubit to be used in the erection of the future Temple is "a cubit and a hand breadth," that is about 25 inches. Just such a cubit as this is recorded in the Great Pyramid in its own peculiar way, for both in the Antechamber and in the Queen's Chamber there are certain indications of measure, which, when applied to the various parts of the building, give such results as to leave no doubt that here is intentionally and unmistakably recorded the Pyramid's standard of measure.

THE ANTECHAMBER is a small and very remarkable room, entered from the southern end of the Grand Gallery by a passage or doorway 41·4 pyramid inches wide, 43·6 high, and 53 long, the shortest of all the passages in the Pyramid, and lower than any of those preceding it. The chamber itself, which is composed partly of limestone and partly of granite, is 116·260 pyramid inches long from north to south (made up of 103·03 of granite, and 13·23 of limestone), 65·2 in its utmost breadth from east to west, and 149·44 high; but it has a sort of granite wainscot on either side, of sufficient thickness to reduce the width of the room at its floor level, to about 41 inches. On the east side this wainscot is only 103·03 inches high, but on the west side the height of it is 111·8 inches, and it is otherwise full of detail which cannot well be described here. The south wall is vertically divided into five equal spaces by

four lines cut deep into the wall over the doorway leading into the King's Chamber.

There is, however, yet a more remarkable feature in this interesting Antechamber. Immediately on entering it, 21 inches from the doorway in the north wall, is a huge slab of granite, composed of two pieces joined together one above another, about 48 inches high, 48 in its utmost breadth, and 15 inches thick, extending across the room, having the appearance of a portcullis, but resting on the solid stone wainscot, and leaving a space of 57 inches between its top and the ceiling, and 43·7 inches between its bottom and the floor; and on this block or granite leaf, as Professor Greaves called it (from the so-called leaf or slat or sliding-door over the waterway of a lock-gate in an English navigation canal), is a projecting boss just 5·005 British inches broad, and this, the fifth part of the cubit which we find symbolized elsewhere, is divided before our eyes into five again; for the thickness of this remarkable boss is one-fifth of its breadth, the granite leaf having been reduced by one inch over the remainder of its surface, in order to leave this boss standing out in relief. This boss, too, is not in the centre of the granite leaf, but exactly one pyramid inch away on one side of the centre, as if the architect would thus so duplicate his standard of measure, and on such a solid mass of masonry, as to render it next to impossible for it to be lost. Further, the distance from the centre of the boss to the eastern end of the granite leaf, in its well cut groove in the granite wainscot, is just 25 of these inches, so that we have tied up here the whole cubit, its fifth part or palm, and its twenty-fifth part or *inch* unit. In the Queen's Chamber also (which I will describe more fully presently) we find a similar method employed of indicating a small but im-

portant quantity by an eccentric arrangement of some more important architectural feature; for a remarkable niche in the east wall, which is the only architectural adornment of this Chamber, is strangely, not in the central vertical line of that wall, but is removed southward therefrom by just the quantity of 25·025 British inches, or one pyramid or sacred Hebrew cubit length.

We perceive by these measures that the number 5 is at the foundation of much of the teaching connected with the Pyramid, as it is indeed the first and most characteristic of the Pyramid numbers. Whether, in its erection, this number was so impressed on the Egyptian workers as to make it especially hateful to them, cannot now be told, but it is certain that they afterwards had a peculiar objection to it. Sir Gardner Wilkinson speaks of 5 as being the evil number in modern Egypt still; it is marked o on their watches; and 5, or any of its multiples, would seem to have been always repulsive to them. When, therefore, the Israelites went out from their Egyptian bondage with a high hand (Exodus xiv. 8), itself a symbol of 5, and marshalled by five in a rank (Exodus xiii. 18, *margin*), it must have been especially galling to their late masters.

If what I have already advanced of the design and character of this building be true, it is highly improbable that this standard of measure, so carefully set forth, is a mere arbitrary whim of the architect; and as the size of the earth can be the only unfailing and unchanging datum from whence to derive a standard of measure, we may expect that the pyramid inch and cubit (the latter agreeing with Sir Isaac Newton's theory of the sacred cubit being 25 inches with a small fraction, and with the cubit and hand breadth of Ezekiel), bear some proportion to earth commensurability.

It is only since Newton's time that men knew anything exact about, or have attributed anything peculiar to, the length of the earth's axis of rotation as different from any other diameter thereof; and it is only very modern science that has been able to arrive, after performing gigantic trigonometrical operations, at any approach to accurate knowledge of the true length of the earth's axis of rotation—that is, its polar diameter. Their best results oscillate between 500,378,000 English inches and 500,560,000, and the probability is that the mean of these figures, or about 500,500,000 is correct. We need not, therefore, be surprised to find that in this building, where the ruling numbers are 5 and 10, the pyramid cubit of 25·025 British inches is exactly the ten-millionth part of the earth's *semi* axis of rotation; the pyramid inch being the five hundred-millionth part of the earth's polar diameter. From this inch our British inch, which is just one-thousandth part less, was probably originally derived, having, during the lapse of ages, lost a thousandth part of its proper length. In 1869 Sir John Herschel, in defending our traditional national measures against those who were moving Parliament to introduce the French system, unconsciously confirmed this, when he urged that the true basis for a scientific unit of measure is the earth's polar axis, and that if that be divided into *five hundred million* parts, one such part will differ from the standard British inch by the infinitesimal amount of only one-thousandth.

With this pyramid standard of measure, bearing as we have seen an exact relation to the only true and unchanging standard in the knowledge of man, viz., the polar axis of the earth, let us see what lessons we can derive by its application to the building, and how *the external* and internal measurements of its various

parts are controlled and affected by it; for having now found the key to many of its secrets, we may proceed to unlock its treasures.

First, then, it has been found, after the most careful measurements have been taken, corrected by our own Royal Engineers, that each side of the Great Pyramid's base, measures 9,140 British inches, or 9,131·05 pyramid inches. The united length of the four sides, therefore, is 36,524·2 of the same pyramid inches, or at a rate of 100 of these inches to a day, the whole perimeter of the building, that is, the total measurements of the four sides of its base, is here found to symbolize the EXACT LENGTH IN DAYS OF THE SOLAR YEAR, viz., 365·242, &c., or 365 days, 5 hours, 48 minutes, 49 seconds and a fraction, which makes it necessary for us to add on one day every four years and to omit one day every hundred years to keep our reckoning nearly right.

This is again shown in the measurement of only one of its sides—9,131·05—which divided by the pyramid cubit gives of course the same result.

Now it must be borne in mind that the Egyptians knew nothing of the exact Solar year, as they reckoned time by the risings and settings of the dog-star Sirius, thus very much shortening time-measure as they had already shortened the cubit; so that more than Egyptian wisdom is displayed here, and that which we have scarcely arrived at in our day is here grandly monumentalized.

But another and much longer measure of time is recorded in this building; no less than the grand cycle called the "PRECESSION OF THE EQUINOXES." For a full explanation of the meaning of this term, I must refer you to a scientific book bearing on such subjects: it will be sufficient here to say that, owing to the attrac-

tion of the sun and moon, but especially that of the moon, upon the protuberant parts of the earth about the equator, causing an eccentric motion of the earth, the equinoxes take place about twenty minutes of time earlier every year, and thus the face of the heavens and the times of the seasons are very slowly and gradually being altered, so that it has been computed by various astronomers that from 24,800 to 25,920 years are required to complete the period of equinoctial precession, and when fully completed, and not till then, the heavens will once more present the same appearance as at the commencement of the cycle. This peculiar celestial cycle, therefore, constituting the grand astronomical clock of the heavens, is set forth in the Pyramid as its chronological dial, and that which astronomers, from the time of Hipparchus, have been attempting to ascertain, was solved by the architect of the Great Pyramid 2,000 years before, for at the rate of an inch for a year, the number of years in the whole precessional cycle is found in the length in pyramid inches of the two diagonals of the base, which, added together, give a result of 25,827, each diagonal giving 12,913·26 pyramid inches.

We have already seen, as suggested by Sir John Herschel, that the angle of the entrance passage, which at midnight of the autumnal equinox in the year 2170 B.C., pointed to the then Polar Star α Draconis, was evidently intended to indicate the date of the erection of the Pyramid, and we may well suppose that the date of the erection of so remarkable a structure would have some reference to the commencement of a new era or cycle of time, such as that set forth in the period of equinoctial precession ; and such seems to be the case. Originally the most barbarous tribes, as well as the

most civilized nations, had but one system of chronology, by beginning the year on the night when the seven stars called the Pleiades are at their culminating point in the heavens at the hour of midnight. This was in the autumn season; "the sweet influences of the Pleiades" spoken of in the Book of Job, being commonly understood to refer to the genial weather of spring, which was supposed to be somehow caused by the peculiar position of the Pleiades in the sky at the spring season.

In the year 2170 B.C., and only then, Alcyone or η Tauri, the chief star in the Pleiades group, was at midnight of the autumnal equinox "crossing the meridian above the Pole at a point high up in the sky, near the equator, and simultaneously with the celestial meridian of the vernal equinox;" while the then Pole Star α Draconis was at the same time crossing the meridan $3^\circ 42'$ below the Pole of the sky, as indicated by the angle of the entrance-passage, down which it was at that time shining. Thus, not only did the entrance-passage then point to the Polar Star, but the Grand Gallery rising up southward, at an opposite angle, but in the *same meridian plane*, seems intended, with the seven overlappings of its high walls, to be a reminder of, and to symbolize, the seven stars of the Pleiades on the meridian and to the south. That whole stellar combination will not again take place until the period of equinoctial precession has run its course, or 25,827 years from the date of the building of the Pyramid, 2170 B.C.

After such a discovery we cannot be surprised if we find the SUN DISTANCE set forth in this remarkable structure—a distance that in the time of Herodotus was supposed to be only 10 or 12 miles, afterwards about

15,000; subsequently 36,000,000; then 75,000,000; and finally, during the last half century, supposed to be 95,000,000 of miles; and it is only within the last few years that this error of computation has been corrected, giving results between 91,000,000 and 93,000,000. But what says the Great Pyramid? Let Mr. Petrie, a Pyramid student, answer, who, after studying the mensurations detailed in "Life and Work," "remarked, and naturally enough, that the circle typified by the base of the Great Pyramid had already been proved to symbolize a year, or the earth's annual revolution round the sun; and the radius of that typical circle had also been shown to be the ancient vertical height of the Great Pyramid, the most important and unique line that can be drawn within the whole edifice. Then that line," said he further, "must represent also the radius of the earth's mean orbit round the sun, however far away that may be, and in the proportion of the ninth power of ten (10^9), or 1 to 1,000,000,000, because amongst other reasons 10 : 9 is practically, in one mode of viewing it, the shape of the Great Pyramid. For this building, by virtue of its π angle at the sides, has practically and necessarily such another angle at the corners, that for every ten units which its structure advances inwards on the diagonals of its base, it practically rises upwards, or points to sunshine by nine. Nine, too, out of the ten characteristic parts (five angles and five sides, including the base side), being the number of those parts which the sun shines upon in such a shaped pyramid, and in such a latitude out of a high sky, when the sun 'sits on the pyramid with all his rays,' and the building is then said to devour its own shadow." To computation, then, Mr. Petrie went, reducing the 5,813 pyramid inches of the Great Pyramid's height to British inches, multiplying them by 1,000,000,000

(10^9), and reducing these inches to British miles, when the result came out 91,840,000; the latest computations of scientific men varying from 91,000,000 to 93,000,000.*

Another interesting discovery has recently been made. We have before noticed that the entrance to the Pyramid is not in the central meridian plane of the building, but about 300 inches away to the east, and it has been demonstrated by Mr. Cockburn Muir that the reason why the builders placed it thus, instead of fixing it on the central line of the structure, as any one not guided by special considerations would naturally have done, was to indicate "the obliquity of the earth's axis to the axis of the ecliptic, as being the main agent in producing the contrasts of summer and winter, while the earth annually revolves around the sun." The way in which this is arrived at is fully set forth by Mr. Smyth at pp. 403 to 407 of "Our Inheritance in the Great Pyramid," to which I must refer you for further information on this head.

Let us now return with our standard of measure to the interior of the building, and we shall see how it reacts on the exterior, so that if there should be an error of measurement by human faultiness in the large exterior, we find the same lesson repeated in the interior in one form or another again and again, as if to ensure correctness and to command attention. Thus are its great lessons pressed home upon us in such a variety of ways,

* Since this lecture was delivered, a letter has appeared in the *Times* from Mr. E. J. Stone, dated Royal Observatory, Cape of Good Hope, January 15, 1878, in which, after stating that he has carefully discussed the observations taken by the Transit of Venus Expedition, 1874, and that his results confirm the more recent determinations, he says: "I believe that the sun's mean distance is confined within the limits of 92,000,000 and 91,600,000."

and with such force and truth, as to make it impossible for an unprejudiced mind to believe that it is all the mere result of accident, or that if intentionally designed by the architect, it could have been the outcome of his own unaided wisdom.

I cannot, however, in a short paper like this, give even a tithe of the ascertained results of the measurements outside and inside this unique erection. It must suffice, therefore, to mention merely its most important lessons, while those who desire a further insight into its mysteries, will find as much information as they could desire in Mr. Piazzi Smyth's published works on the subject.

To begin, then, with the GRAND GALLERY. The stones forming the walls of this ascending passage (all of polished limestone 28 feet high) overlap each other seven times between the ramps, or benches previously described, and the ceiling; the latter being composed of 36 roof-stones, laid one over another throughout its whole length. Now the length of the Grand Gallery along the floor is 1881·4 pyramid inches, but along a certain intermediate part between floor and ceiling, marked once by a shallow groove, is 1878·4 pyramid inches. This length, divided by the number of roof-stones (36) = 52·177, &c., the exact number of weeks and fractions of a week in the year; and this again multiplied by 7 (the number of overlappings in the walls), gives the exact length of the year as 365·242 days.

If next we pass into the ANTECHAMBER, previously described, and from whence we started with our standard of measure, we shall find other examples of the various methods employed by the architect to reiterate and enforce his teachings.

The floor of this chamber, as we have already seen,

is constructed partly in granite and partly in limestone; the granite portion measuring 103·033 pyramid inches and the whole length 116·260, thus exhibiting in another form the squaring of the circle problem; the area of a square measuring 103·033 on the side being equal to the area of a circle having 116·260 for its diameter; and this 116·260 × π (3·14159, &c., that invaluable number in modern mathematics representing proportion of diameter to circumference of a circle) = 365·242, the exact length of the year and also the number of pyramid cubits contained in the length of the Pyramid's base side. This figure again 116·260 multiplied by 50 (representing the number of courses of stonework between the level of the Antechamber and base of Pyramid) = 5,813, the ancient vertical height of this building. Again 116·260 × π × 25 = 9,131·05 the length of the base side of the Pyramid.

It is also found that the lower stone of the granite leaf is so placed between floor and ceiling as to measure from its centre to the floor 58·13 inches, and from its centre to the ceiling 91·31 inches, these measurements showing on a scale of 1 to 100 the height and base-side length respectively of the structure, the sum of these two figures, 149·44, being the actual height of the Antechamber.

It will be remembered that we found the wainscot on the eastern wall of this chamber to be 103·033 inches high, which, as we have just seen, is also the length of the granite portion of the floor and exactly one-half the breadth of the King's Chamber; and this figure plays a further important part in many of the features here and in the King's Chamber: for instance, if multiplied by 5, it gives the length of the cubic diagonal of the King's Chamber, 515·165; if multiplied by 50 the

result is 5151·65, or the length of the side of a square of equal area, *first*, to a triangle of the shape and size of the Great Pyramid's vertical meridian section; *second*, to a circle having the height of the Pyramid for a diameter; and if multiplied by 100, we have 10,303·3 as the diameter of a circle, the area of which is equal to the area of the square base of the Pyramid.

The height of the west wainscot in this chamber, 111·803 inches, has also its instruction to offer, as among other calculations it is found that if this figure, divided by 100, be multiplied by the breadth of the King's Chamber—206·066—the result is 230·389, or the height of the King's Chamber from floor to ceiling.

But I desist, or I might multiply examples from this interesting little room, and it is now time for us to pass on and examine the apartment into which the Antechamber leads, where we shall find yet further teaching to arrest our attention, not only bringing out more completely, intensely, and accurately, the lessons we have already considered, but adding new instruction peculiar to itself.

THE KING'S CHAMBER, so called from its being supposed to have been built to contain the mummy of King Cheops, but which might be better called the Coffer Chamber, or Chamber of Fifty, is the crowning apartment of the whole of the interior of this gigantic monument.

Its dimensions, expressed in pyramid inches, are as follow :—

Breadth of King's Chamber	= 206·066
Height (from floor to ceiling)	= 230·389
„ (including that portion of the walls under the floor plane) ..	= 235·50

Length	..	..	..	..	..	=	412·132
Diagonal of end	..	..	..	..	..	=	309·099
„ floor	..	..	..	..	..	=	460·777
„ side	..	..	..	..	..	=	472·156
Solid or cubic diagonal	..	..	..	..	..	=	515·165

The grand division test of this chamber being 103·033, of which it will be seen four of the above measurements are multiples.

This magnificently finished room is wholly constructed of solid polished or smoothed granite, in huge blocks of exquisite workmanship, and is entered from the Antechamber by a low doorway or passage, all of granite, 43·6 inches high, 41 inches wide, and 100 inches long. The roof stones, nine in number, extend from side to side of the chamber, resting upon its walls, and Col. Howard Vyse, in making excavations, discovered, immediately above this chamber, five hollow spaces, one over the other, so formed as to shield its roof stones from the enormous superincumbent weight of the Pyramid above. The four upper spaces had been absolutely closed in and about with solid masonry, but the fifth and lowest is furnished with a kind of secret passage-way leading to it from the almost inaccessible top of the southern end of the Grand Gallery on its eastern side.

One of the first things to strike the eye of a traveller, as he enters this truly grand room, is the division into five, of the wall courses of granite, each course of stones being sized to an equal height, which could only have been accomplished on this hard material by much extra labour, the huge blocks, exactly 100 in number, though all varying in length, being every one of them of the same height of 47·1 pyramid inches. The lowest course, however, is apparently only 42 inches high, but three of the floor blocks having been removed in making

excavations, it was found that this lowest course sinks five inches below the floor level, thus completing the regularity of height for all the five courses, the top of the lowest course being by this means brought nearly to a level with the top of the granite coffer.

The capacity or cubic contents of that lowest course of the room, 42 inches high, is equal to 50 times the cubic contents of the Coffer, and 50 is a number appropriately belonging to this chamber, which, like the Antechamber, stands on the level of the fiftieth course of the masonry of the whole building from the pavement upwards. On the granite floor of this chamber rests the Coffer, which we shall find to be a standard of liquid and dry measure, of weight and capacity, from the drop to the pint, from the gallon to the quarter, from the pound to the ton, and containing within it, in miniature, almost every truth before expressed in the building.

This COFFER, made of Syenitic granite, the hardest material yet found in the building, is placed towards the western end of the chamber, and is the only moveable article within the entire building, but so weighty as to defy all ordinary attempts to alter its position, although the Arabs have managed to tilt it by placing a hard jasper pebble under it, and to chip by dint of sheer hard blows with their hammers, for the benefit of specimen-mongers.

It is in form an oblong rectilinear hollow of the following dimensions:—

OUTSIDE MEASURES OF THE COFFER IN PYRAMID INCHES.

Length from 89·92 to 89·62,	corrected for slight concavity of sides.	
Breadth from 38·68 to 38·61,	,,	,,
Height from 41·23 to 41·13,	,,	,,

INSIDE MEASURES OF THE COFFER IN PYRAMID INCHES.

Length, 77·85, supposed to be true within half a tenth of an inch.

Breadth, 26·70, " "

Depth, 34·31, " "

Thickness of bottom, 6·91.

" sides 5·98.

These measurements in British feet and inches are roughly—

	Ft.	In.		Ft.	In.
Outside length	7	6	Inside length	6	6
" breadth ..	3	2½	" breadth ..	2	3
" height	3	5¼	" height	2	10¼

Thickness—bottom, 7 inches; sides, 6 inches.

It was found to be exceedingly difficult to measure, in consequence of the rough treatment it is continually receiving from the Arabs in their efforts to procure specimens of it for their visitors; but as nearly as modern measurements will enable us to calculate, the following are a few of the results that have been ascertained in relation to the Coffer:—

1. It contains, or Mr. Smyth thinks it was meant to contain, 71,250 cubic pyramid inches of internal space.
2. The mass of its sides and bottom amount also to 71,250 cubic pyramid inches.
3. The exterior volume is thus double the interior capacity.
4. The height of the Coffer is to the length of two of its adjacent sides as the diameter to the circumference of a circle.
5. The volume of the bottom is one-half the volume of its sides and ends.

6. It is, as we have already noticed, in its internal capacity, one-fiftieth of the size of that part of the King's Chamber marked by the lowest course of stonework of the granite wall down to the floor.
7. Its distance from the western end of the chamber, before being tilted and slightly removed from its original position, was evidently, Mr. Smyth thinks, 51·516 pyramid inches, or one-tenth of the cubic diagonal of the chamber, leaving a distance between the eastern side of the Coffer and the *middle* of the chamber of 116 inches, or, within a minute fraction, the length of the Ante-chamber, which, as we have seen, has several remarkable interpretations; the north and south ends of the Coffer being distant from the north and south walls respectively 58·2 inches, or the height of the Great Pyramid divided by 100.

By this peculiar position of the Coffer in the King's Chamber, that chamber is theoretically divided into two equal parts; and "if we take the precise breadth and half length of the room, 206·066 pyramid inches, and for height the larger second height of 235·5 inches, we obtain almost exactly 10,000,000 cubic inches as the contents of each half of the room." Now, we have already seen that the cubit of 25 pyramid inches, the standard of linear measure, is exactly the ten-millionth part of the earth's *semi-axis* of rotation; and if, therefore, we have 10,000,000 of those *cubic* inches in one half of the room containing the Coffer, we may expect "that something is accomplished there connected with capacity measure, depending primarily on a length of two such cubits," or 50 inches, which is the ten-millionth of the earth's *axis* of rotation. "And this," says Mr.

Smyth, "is decidedly the proper fraction to begin with for capacity measure, when we have already chosen one ten-millionth of the *semi-axis* for linear measure, the reason being that in measuring distances, say amongst the spheres of heaven, men measure them from centre to centre, and, therefore, have only to take account of the radii of each; but in dealing with either their capacity or weight, we must take each sphere in its entirety."

If, then, we are to find in the Coffer STANDARDS OF CAPACITY AND WEIGHT, we shall not be surprised to learn that in this building, whose standard of linear measure bears a notable proportion to the polar diameter of the earth, the standards of capacity and weight are founded on the *mean density of the whole earth;* that is, the actual weight of the earth, as compared with the weight of a vessel of the same size filled with water at a certain temperature. This has long been a subject of paramount interest to philosophers, but the most successful attempt to weigh the earth was made by Mr. Baily, whose experiments lead to the result that the earth's mean density is 5·67 times that of water. "Now," says Mr. Smyth, "the earth's mean density comes out from the Pyramid, if at all, most simply, and to an accuracy at once of three places of figures certain, from the cubic contents of the Coffer in pyramid inches divided by the tenth part of 50 inches cubed, that is, 71,250 divided by 12,500; the quotient being 5·70."

Here, then, on the basis of the earth's mean density is founded the system of pyramid *weights and measures*, forming the standards from which it is probable some nations originally received theirs.

One of John Taylor's original propositions was that "the quarter corn measures of the British farmer are

fourth parts, or quarters, of the contents of the Coffer," and that the Coffer itself was probably represented by the old Saxon chaldron, as well as by the Hebrew laver, which contained four chomers. Now the fourth part of the Coffer is found to contain 17,866 cubic British inches, while the British quarter contains 17,745, so that here again during the lapse of ages the British quarter, like the British inch, has lost a fractional part of its original quantity, the greater wonder being that it does not vary more.

Our very term "quarter," the origin of which cannot be traced, seems to indicate that originally, perhaps in the far-off Saxon time, there was a measure of four times its quantity, which must have approximated very closely to the capacity of the Coffer; but there is no capacity measure now on the statute-book of greater size than the quarter.

If now we divide the Coffer's contents into 2,500 parts, or 50 × 50—fifty being the characteristic number of the chamber—we shall arrive at its unit of *capacity* measure, 1 pyramid pint; each pint containing 10 fluid ounces or 10,000 drops.

For the purposes of *weight* the Coffer may be similarly divided; the weight of its contents in pure water at 68° Fahrenheit, and barometer register at 30 inches, being taken as the pyramid ton, which divided into 2,500 parts gives the pyramid unit of weight, 1 pound; each such pound containing 10 ounces or 10,000 grains, so that there is more truth than might be imagined in the ancient English rhyme, that

> "A pint's a pound
> All the world round."

This pound, too, which is but a trifle more than the

old Saxon pound, is equal to the weight of five cubic inches of the earth's mean density.

Further, there appears to be, from calculations made by Mr. Piazzi Smyth, an even commensurability between the *weight of the Great Pyramid* and the weight of this planet Earth; for the weight of the Great Pyramid, after allowing for its hollow internal spaces, is computed to be 5,273,834 pyramid tons, while the weight of the earth is, as nearly as possible, five thousand two hundred and seventy-three trillions, just one thousand billion times the weight of the Pyramid.

But we spoke just now of the Coffer's weight in water at a certain temperature and pressure, and in order that the standards we have been just considering should be perfect, there should be found in the chamber in which the Coffer is placed a means of regulating ITS TEMPERATURE, as no system of weights and measures can be complete without a reference to heat, and its power of altering the dimensions and weights of all bodies. The barometric pressure is kept, by the law of the atmosphere over all the pyramid region, close to 30 inches, but special means have been employed by the architect to ensure one constant and uniform temperature in the Coffer Chamber, for the ventilation of this chamber has been provided for by means of two ventilating channels nearly opposite to one another, in the north and south sides of the chamber, having their openings of $8\frac{1}{2}$ inches broad by $5\frac{1}{3}$ inches high on the north side, and rather more than double this measure on the south side, at about 42 inches from the floor level, and after running in a straight line a few feet into the thickness of the chamber wall, pass upwards transversely through the solid masonry of the building, and find their exit on the north and south sides of the Pyramid respectively.

The result of Mr. Smyth's experiments here went to show that in this chamber, shielded from the outside heat and cold by a thickness of nowhere less than 180 feet of masonry, the temperature is so regulated by this, and the effect of the air channels (which have now been partially stopped by the Arabs), as to be intended to register, in its normal state, 68° Fahrenheit —that is, one-fifth the distance between the freezing and boiling points of water, the mean temperature of all lands inhabited by man, and the most suitable degree for him to live in. To make this measure pyramidal, Mr. Smyth puts zero at 0, and boiling point at 250, making the temperature of the King's Chamber in accordance with its symbolical number, 50 pyramid degrees.

There is, moreover, a remarkable commensurability between the capacity contents of the coffer with the Ark of Noah, the sacred Ark of the Covenant, and Solomon's molten sea, tending to show that they all probably owe their origin to the same source; and as we shall presently have to consider the sacred and prophetic teachings found in the Pyramid, it may be well here to observe, before we pass from the Coffer, what relation it bears to the only three buildings or their furniture mentioned in Scripture, the measurements and design of each of which were directly given by God himself (Gen. vi. 15, 16, Ex. xxv., 1 Chron. xxviii. 10-19, 2 Chron. iii. 3).

The capacity contents of Noah's Ark are found by the Biblical statement to be 300 by 50 by 30 cubits, or reduced to pyramid inches 7,500 by 1,250 by 750, to which must be added the space occupied by the window, which "extended probably the whole length of the Ark along the roof, and acted as a ventilator, being covered by a ridge roof," and finished in or within a cubit above,

the mean of such space being about 7,500 by 1,250 by 10 pyramid inches, the whole giving a result of 7,125,000,000 cubic inches of space, or exactly 100,000 times the capacity of the Great Pyramid Coffer or Ark.

If, again, we refer to the measures given in Exodus xxv. for the Ark of the Covenant, which are outside measures only, we find that after making due allowance for the probable thickness of such a sized box in such a quality of wood, its internal contents are the same as the internal capacity of the Coffer, viz., 71,250 cubic inches.

Again, with reference to Solomon's molten sea, which was probably hemispherical, and which is described (1 Kings vii. 23-26) as having a circumference (probably inside measure) of 30 cubits, and a diameter (probably outside) of 10 cubits, the internal cubic contents of such hemisphere after deducting from the diameter the thickness of a handbreadth would give a result equal to 50 times the internal capacity of the coffer. We have already seen that the lowest course of the King's Chamber has been so adjusted in height by the removal from sight of its lowest five inches, that the cubic contents of that lowest course amount to 50 times the Coffer's contents, being therefore exactly equal to the cubic contents of Solomon's molten sea, which contained the measure of 50 lavers, each of which lavers was therefore of the capacity of the Coffer and of the Ark of the Covenant.

Before passing from the King's Chamber, we notice one or two points as indicative of but a few of the many ways in which are here shown some of the time and other measures of which we have taken account in other parts of the building. The period of equinoctial precession, for instance, is memorialised again at the King's

Chamber level of the Great Pyramid; for the floor of that chamber being by measure 1,702 inches above the base of the whole building, it has been found that the circuit of the Pyramid at that level = 25,827 pyramid inches. And if the whole vertical height of the Great Pyramid typifies the distance of the sun from the earth, the partial vertical height from the King's Chamber level upwards—viz., 4,110 inches—indicates the radius of the precessional circle of the equinoxes in years.

"Again," says Mr. Piazzi Smyth, "considering pyramid inches in the King's Chamber to signify pyramid cubits outside the building, the following results come out correctly to six places of figures:—Take the length of the King's Chamber, 412·132, to express the diameter of a circle; compute, by the best methods of modern science, the area of that circle; throw that area into a square shape, and find the length of the side of such square. The answer will be 365·242 pyramid cubits. If, on the other hand, we take the length of this chamber, 412·132, as the side of a square, find its area, and throw it into a circular shape, the radius of such a circle will be found to be 232·520; or, in pyramid cubits, the vertical height of the Great Pyramid."

We must now take a rapid survey of the QUEEN'S CHAMBER, so called because it was supposed to have been intended to contain the mummy of King Cheops' Queen, but which might with more propriety be designated the Cubit Chamber, or Chamber of 25, standing as it does on the twenty-fifth course of the pyramid masonry, and embodying in a peculiar form the length of the pyramid cubit. This chamber is entered by a horizontal passage, commencing at the north end of the Grand Gallery, and running immediately underneath it. This passage was evidently once

hidden from view when the inclined floor of the Grand Gallery joined the floor of the first ascending passage; for the places for the stone joists that once supported the construction of the inclined passage from the first ascending passage to the Grand Gallery, still remain. The length of this passage is 1,518 pyramid inches, and during one-seventh of its length at the commencement, it is open to the Grand Gallery, then for five-sevenths of its course it is of the same dimensions as the first ascending passage, viz., 47 inches high by 41 wide, while during the remaining seventh of its length at the end, there is a drop in the floor of 20 inches, making the height of it at this part of its course about 67 inches. The floor of this passage during its entire length, as well as the floor of the Queen's Chamber, has been left rough and unfinished, unlike any of the other passage floors, and evidently meant to be so, for some symbolical teaching; while from the walls and ceiling of the passage, as well as from the Queen's Chamber itself, there is a thick incrustation of salt, which is continually exuding, as it were, from the pure white stone of which it is built, in sparkling-like crystals; the joints of the stones being all as exquisitely true as in the other chambers.

This chamber, by reason of having for ceiling a double inclined slope like a cottage roof, may be said to have seven sides—two in the ceiling, four in the walls, and one base side. Its length from east to west is 226·5 pyramid inches; its breadth 205, and the height of its north and south walls 182·62; the east and west walls, measuring to the ridge of the roof, about 245 inches. Its cubic contents, carefully computed, amount to ten million cubic pyramid inches.

The most prominent feature of this chamber is a

peculiar niche in the east wall, 185 inches in height, but decreasing in breadth five distinct times, the centre of the niche being, as I have already stated, exactly one pyramid cubit from the central vertical line of the wall, thus securely monumentalising this important standard of 25.025 British inches. The height of this niche, 185 inches multiplied by π (3·14159, &c.,) and again by 10, gives the height of the Great Pyramid, 5,813 inches. The height of each of the north and south walls, 182·62, gives, when doubled, 365·24, or the number of days in the solar tropical year; and this again multiplied by 25 = 9,131, the length of the Pyramid's base side. The height of these walls also is found to bear the same proportion to the breadth of the chamber as that breadth bears to the height of the King's Chamber—thus:

As 182·62 : 205 : : 205 : 230·1

Another newly discovered feature in this chamber must be mentioned before we pass on to a further branch of our subject. Mr. Waynman Dixon, C.E., in company with his friend Dr. Grant, perceiving a crack in the south wall of this chamber which allowed him to push in a wire to a considerable length, set his carpenter man-of-all-work to try the effect of making a hole there with cold steel chisel and hammer, when there was presently found a horizontal tubular channel about nine inches in breadth by eight inches in height, going back seven feet into the wall and then rising at an angle of about 32°. This channel was cut into the chamber lining block in its entire thickness, save the thin plate or tympanum, if it may be so called, of five inches thick, which was left to conceal its existence on the inner surface of the wall. Measuring off a corresponding position on the north wall, a similar channel was found

there, rising like the other at the same angle, but in an opposite direction. For what purpose these channels were intended, or what symbolical meaning they are intended to convey, is an enigma yet to be solved. Although, now that they are open, they might serve for ventilating channels, such could not have been their original intention, as they were hermetically sealed up. What, then, was their use? Mr. Casey thinks they may have been meant for acoustic purposes, as the thin plate of stone (thin by comparison with the colossal masonry around) would serve as the tympanum of an ear that led possibly to another as yet undiscovered chamber, a true whispering gallery that would be capable of faithfully transmitting any sounds through the length of the channel to its exit. It must be left for future Pyramid students, however, to discover or suggest the real use or symbolical meaning of these remarkable channels.

We have now traversed the entire building with such of its chambers as have, up to the present time, been discovered, and with all the facts before us that have been brought to light, is it too much to say that no mere human wisdom could have planned and carried out in all its details this marvellous structure?—a structure whose designer possessed an acquaintance with architecture in its theory and practice that has never been excelled, and who apparently had no predecessor to imitate and certainly had no successor to surpass him—a structure which in perfection of workmanship, in grandeur and wisdom of plan, has outstripped all rivalry, and which in its entire mass and separate parts is a type and lasting memorial of the squaring of the circle problem—a structure which gives a linear standard of measure founded on the earth's axis of rotation, a weight and capacity measure based on an employment of the whole earth's

mean density, a temperature standard based on the mean surface temperature of the whole earth, and a time standard founded on the precession of the equinoxes assisted by meridian observations combining a well-chosen polar star with an equatorial star. Such a combination of truth, whether understood by the builder of the Pyramid or not, could only have been derived from the divine Architect of the Ark of Noah, the Tabernacle of Moses, and the Temple of Solomon, and this will make itself the more apparent as we now pass on to consider its sacred and prophetic teachings.

III.—ITS SACRED AND PROPHETIC TEACHINGS.

It has been urged against the views propounded in this paper, that there does not appear to be any direct reference to the Pyramid in the Word of God, although, as it was erected before Abraham's time, and certainly centuries before Moses, it must have been a familiar object to all who visited Egypt from that time until the close of the canon of Scripture. While it is indeed true that no Scripture can be adduced which can be positively shown to refer to the Great Pyramid, there are a number of passages in the sacred writings that can only be explained by a reference to some such building, and if the Pyramid be a building of God, the very silence of the Scriptures concerning it should lead us to the conclusion that it is purposely sealed up until the time of the end, when, and during the 1,000 years of the personal reign of the Messiah, the truths which it is intended to teach will be fully understood and appreciated.

In those days all science will have to be tested in the

presence of God, and during that reign of peace, the just weight and balance which are the Lord's, the just ephah, and hin, and bath, and all the weights of the bag, and the meteyard which are His delight,* may possibly be brought forth from this standard of reference for use among all the nations. All the thoughts and wisdom of man will then be corrected and set right by the King who shall reign in righteousness, the perfection, rectitude, and truth of whose reign is here set forth in symbol. Had it been indicated in Scripture that this building had been erected under divine guidance, for a purpose yet hidden in the mind of God, it cannot be doubted that either the superstition of men would have made it an object of worship, or the rude hand of the spoiler would have endeavoured to rob it of its secrets.

Let us now turn to some of the passages of Scripture that seem to refer to such a building as the Great Pyramid. In the Book of Job—probably the first written of all the books of Scripture, and which shows so much knowledge of astronomy and of the works and ways of God—we find it said of God, as Creator, that "He stretcheth out the north over the empty place, and hangeth the earth upon nothing" (Job xxvi. 7), which is confirmatory of our present knowledge; while further on there is a very remarkable reference to the creation of the earth, alluded to under the type of a building with foundations, and measures, and sockets, and a corner-stone, when the Lord answered the Patriarch out of the whirlwind, and said:—

"Where wast thou when I laid the foundations of the earth? declare, if thou hast understanding.

* Deut. xxv. 15. Prov. xi. 1; xvi. 16. Ezek. xlv. 9-11.

"Who hath laid the measures thereof, if thou knowest; or who hath stretched the line upon it?

"Whereupon are the sockets thereof made to sink; or who laid the corner-stone thereof?

"When the morning stars sang together, and all the sons of God shouted for joy?"—(Job xxxviii. 4, 7, *margin.*

Whilst this might apply to the building of an ordinary house, it is without question especially applicable to such a building as the Great Pyramid, built of stone, by the most careful measurement on a previously prepared platform of living rock, into which, at its four corners, socket-holes were cut to receive four of the five corner-stones, from whence to stretch the measuring line *upon* it, which expression is more applicable to the inclined surface of a pyramid with such an angle, than to the vertical walls of an ordinary house. The fifth corner-stone, diverse from all the rest, not one of the foundation stones, but the topmost stone of the whole, a perfect pyramid in itself, the head stone and chief corner-stone in one, the finishing and crowning portion of the whole work, is here emphatically called "*the* corner-stone," at the final placing of which it is said "the morning stars sang together, and all the sons of God shouted for joy." Of all the stones required for building the Great Pyramid, and which, from the quarry marks and instructions to the masons still legible upon some of them, appear to have been prepared at the quarry by the architect's orders beforehand (like the stones used in building Solomon's temple), this unique, five-sided (including the base side), five-cornered, many-angled stone, must have been the subject of much criticism amongst the builders, and have been "a stone of stumbling and rock of offence" to those whose heads did not understand and whose hearts did not appreciate

the work. But "the stone which the builders refused" was to "become the head stone of the corner" (Psalm cxviii. 22), and to be brought forth to crown the whole edifice. So the Lord Jesus presented Himself to the Jewish builders, and convicted them out of their own mouths, in the parable of the wicked husbandmen, of rejecting Him, at the close of which He said, "Did ye never read in the Scriptures, 'The stone which the builders rejected is become the head of the corner: this is the Lord's doing, and it is marvellous in our eyes? And whosoever shall fall on this stone shall be broken: but on whomsoever it shall fall it shall grind him to powder.'" (Matt. xxi. 42, 44. See also Mark xii. 10; Luke xx. 17.) Then, after his Master's rejection, Peter, in Acts iv. 11, identifies the Jews as the rejecting ones in these words, "This is the stone which is set at nought of *you* builders, which is become the head of the corner." So Paul, in Rom. ix. 32, testifies, "They stumbled at that stumbling-stone; as it is written, 'Behold, I lay in Sion a stumbling-stone and rock of offence; and whosoever believeth in Him shall not be ashamed,'" which is a quotation from Isaiah viii., 14, where it is added, "And many among them (both the houses of Israel) shall stumble, and fall, and be broken."

Peter never forgot what was involved in his confession of Jesus as the Christ, the Son of the living God, the Rock on which His Church should be built, and that his name, Cephas (stone or fragment), was given to him by Christ on the day when he was first brought to Him; and in 1 Peter ii. 4—8, dropping the simile he had been previously using, he says, speaking of Christ, "To whom coming as unto a living stone, disallowed indeed of men, but chosen of God, and precious, ye also

as lively (or living) stones are built up a spiritual house, a holy priesthood, to offer up spiritual sacrifices acceptable to God by Jesus Christ. Wherefore also it is contained in the Scripture, Behold, I lay in Sion a chief corner-stone, elect, precious; and he that believeth on him shall not be confounded. Unto you therefore which believe He is precious; but unto them which be disobedient, the stone which the builders disallowed is become the head of the corner, and a stone of stumbling and a rock of offence, even to them which stumble at the word, being disobedient, whereunto also they were appointed."

The Apostle Paul also, in Ephesians ii. 19—22, uses language which, if applicable to any building, is only *fully* applicable to one which is Pyramidal in its construction; for his words are, "Ye are . . . fellow-citizens with the saints and of the household of God, and are built upon the *foundation* of the apostles and prophets, Jesus Christ himself being the *chief corner-stone, in whom the whole building fitly framed together*, groweth unto an holy temple in the Lord." And in this fitly framing of the whole building, as it grows from a broad base upwards into one corner-stone above—a head and chief and topmost corner-stone—there is an unmistakable allusion to such a building as the Pyramid.

We have a further allusion to the Messiah in the 2nd chapter of Daniel, as "A STONE cut out of *the mountain* without hands," breaking to pieces together the Gentile powers, as set forth in the prophetic image, so that they became like the chaff of the summer threshing floors, thus fulfilling the sentence of our Lord, "On whomsoever it shall fall it shall grind him to *powder*;" after which, it is said, that "the stone that smote the image became a great mountain, and filled the whole earth."

There are many kindred passages to these in the Scrip-

tures of truth, which the limit of this Lecture will not permit me to enter upon; but in Isa. xix. 18-25, we have testimony of another kind. The subject is that of Egypt's conversion and blessing with Assyria and Israel in the latter day, and the Prophet says: "In that day there shall be an altar to the Lord in the midst of the land of Egypt, and a pillar at the border thereof to the Lord. And it shall be for a sign and for a witness unto the Lord of Hosts in the land of Egypt." Whatever this may refer to, it is certain that the Pyramid is in the exact position here indicated, for it stands in the centre, and, at the same time, at the border of the sector-shaped land of Egypt. In reference to this Scripture quotation, Dr. Margoliouth, the editor of the *Hebrew Christian Witness*, says "that the word here translated pillar (*matzaybhah*) is different from another word so translated, and means an erection, a pile, a durable structure, to commemorate some important historical event, and might well be applied to a pyramid."

If the surmise, therefore, be correct that the pillar here spoken of and the Great Pyramid, are identical, we may expect that in the coming day of millennial blessing the long-sealed secrets of this *pillar of witness* will be disclosed, unfolding the marvellous wisdom of God, and bearing witness to Jehovah, as "the same yesterday, and to-day, and for ever."

And, as when it was in building, it bore testimony to the one and only true God by crushing out for the time Egyptian idolatry, so it may be that, after the coming time of apostasy, when the Dragon (Satan) has set up his King (the Beast and the Antichrist), giving him his power and seat and great authority, and whom the second beast, the false prophet, will have power to cause the dwellers on earth to worship; and after the

destruction of Antichrist and his confederate hosts on the field of Armageddon by the brightness of the coming of Him whose right it is to reign, this Pillar or Pyramid will again be a sign and a witness unto Jehovah of Hosts that He alone is "The Great, the Mighty God, the Lord of Hosts is His name, great in counsel and mighty in work which hast set signs and wonders in the land of Egypt unto this day" (Jer. xxxii. 18-20).

By the Abrahamic covenant (Gen. xv. 18) the original grant of the promised land to the Israelites was from the river of Egypt (the Nile) unto the great river, the River Euphrates; and when, in the coming day, the patriarchal covenants shall be fulfilled in all their conditions, as laid down by Moses and confirmed by Ezekiel, this Pillar will not only stand in the midst and at the border of the land of Egypt, but at the border, also, of the then land of Israel, being on the Egyptian side of the Nile, which will form the boundary of Israel's inheritance.

And when Jehovah shall set His hand a second time to recover the remnant of His ancient people, we are told "He shall set up an *ensign* for the nations, and shall assemble the *outcasts* of Israel (the ten tribes), and gather together the *dispersed* of Judah (the two tribes commonly called Jews) from the four corners of the earth;" and to facilitate their return, "the Lord shall utterly destroy the tongue of the Egyptian sea, and with His mighty wind shall He shake His hand over the river, and shall smite it in the seven streams thereof, and make men go over dryshod. And there shall be a highway for the remnant of His people which shall be left from Assyria like as it was to Israel in the day that he came up out of the land of Egypt" (Isa. xi. 11 16). "In that day there shall be a highway out

of Egypt to Assyria, and the Assyrians shall come into Egypt, and the Egyptians into Assyria" (Isa. xix. 23). This highway will probably pass in view of the Great Pyramid, which, in its provision of a common, just, and uniform system of metrology for the whole of mankind, will be a witness to the Lord of the cessation of the ages of oppression, of war, and of injustice.

"As," says a recent writer, "the *altar* of witness at the border between the Eastern and Western tribes (Josh. xxii.) witnessed to future generations, that both sets of tribes belonged to the God of Israel; and as the *pillar* of witness between Jacob and Laban (Gen. xxxi.) testified that neither was to oppress the other; so the Pyramid—placed at the junction points of many lands and realms, where North and West meet and cross over to visit South and East, and South and East pay back to North and West—is a monumental witness, showing by its provision for full justice that God is not the God of the Jews only but of all peoples."

Thus the same building that witnessed the departure of the Israelites as they went up "by five in a rank from the land of Egypt" will look down upon their returning hosts, as they pass along the highway made for them, when "in that time shall the present be brought to the Lord of Hosts of a people scattered and peeled" (Isa. xviii. 7). "And they shall bring all your brethren for an offering unto the Lord out of all nations, upon horses and in chariots, and in litters, and upon mules and upon swift beasts (or 'swifts,' which would include railway trains) to my holy mountain Jerusalem, saith the Lord, as the children of Israel bring an offering in a clean vessel into the house of the Lord." (Isa. lxvi. 20.)

From this point we pass naturally and easily to the Pyramid's own internal evidence of its sacred origin.

If it be, as in truth it would seem to be, "for a sign and for a witness to the Lord of Hosts," its testimony will be in accordance with the written word of God, but in a speech and language peculiar to itself. "Known unto God are all His works from the beginning of the world" (Acts xv. 18). "I am God, and there is none like me, declaring the end from the beginning and from ancient times the things that are not yet done" (Isa. xlvi. 10). "Through faith we understand that the worlds (ages or dispensations) were framed by the word of God" (Heb. xi. 3). And here we appear to find foreshown and framed, in this miracle of stone, an enduring record of the length of the dispensations in five principal dates, as we shall presently see.

It was a young Scotchman, a diligent student both of Scripture and the Pyramid, who, in 1865, broke the first ground in the prophetical symbolisms of its passages and chambers, since which time many others have added their quota to the development of the subject. According to him, the *descending* entrance passage is typical of that dispensation after the Flood, when men, following their own inventions and rejecting the patriarchal worship of the true God, began their *descent* to the depths and abominations of idolatry, pursuing a course which could only end in the bottomless pit, so sensibly represented by the subterranean chamber deep down in the rock under the very centre of the Pyramid, and without any finished flooring. The first ascending passage he explained as representing the Mosaic dispensation, when God, in the exercise of His sovereignty, chose out from among the rest of mankind a peculiar people unto Himself, and this led on to the Christian dispensation, typified by the lofty Grand Gallery in which for the first time within the Pyramid there is liberty to stand

upright; the well mouth at the commencement of this gallery setting forth the descent of Christ into Hades and His resurrection from the dead. But all this might be objected to as a mere "fanciful theory, which might with equal propriety be applied to any angularly descending or ascending set of shafts or passages in any mine or tomb." Most true; but remembering, as has already been shown, that inches of length have been used by the designer to indicate years of time (see page 34), let us take the Pyramid's unit of measure in our hand and measure the distance of these passages, and we shall find that in a Pyramid-inch to a year, the dispensations are here accurately foreshown; for the length of the floor of the descending passage, from its beginning to the point of its intersection by the floor of the first ascending passage, gives 985 years as the period from the Flood (2527 B.C.) to Moses. The measure of the first ascending passage gives in like manner 1,542 years, (or if measured from its junction with the roof of the entrance passage, 1,483 years,) as the period of the Hebrew dispensation from Moses to the birth of Christ; while in the Grand Gallery measuring 1881·4 inches, the present dispensation is probably set forth as intended to contain nearly 1,881½ years, which would bring us to about the middle of A.D. 1882.

But that is not all; for at the commencement of the Grand Gallery we have set before us the most solemn and wonderful event that has ever taken place in the history of mankind, no less than the death and resurrection of our blessed Lord. Measuring from the commencement of the Gallery along the line of its floor on the west side, a distance of from 33 to 35 inches (about the number of years of our Saviour's earthly life) we come right over against the centre of a sepulchral

looking aperture, where part of the floor and wall have been torn away, or blown from within outwards, as if by some uncontrollable explosive force, leaving exposed the mouth of this gaping tomb. From this open sepulchre, a passage of very small bore trends westerly for a short space, till it reaches the edge of a dark, almost perpendicular abysmal shaft, which descends first to a kind of natural grotto in the rock, which might well represent Hades, and then continues its descent down to nearly the lowest point of the deep and dismal descending passage, just before it passes into the subterranean chamber, symbolising the bottomless pit, some 180 feet below in the living rock.

We have, then, here in this parable of stone the date of Calvary in our Lord's life, His inhumation in the tomb, and His descent into Hades; while His glorious resurrection is set forth by the stone that once covered the entrance to that sepulchral well having been burst out or rolled back with triumphant power from its mouth (and which stone must have been once so thrown out, and is now not to be found), indicating how totally unable was the grave to hold Him beyond the appointed time. If this be so, He might well say when asked by the Pharisees to rebuke His disciples, who hailed Him as coming in the name of the Lord, "I tell you that if these should hold their peace, the *stones* would immediately cry out." (Luke xix. 40.)

But there was yet to be a crucial test of the correctness of these measurements and of the Messianic symbolisms here set forth; and in order that the steps which led to this remarkable confirmation may be seen, I will give the record very much in the words of the Astronomer Royal of Scotland, Mr. Piazzi Smyth, from his work entitled "Our Inheritance in the Great Pyramid."

An earnest Pyramid student, Mr. Charles Casey, of Pollerton Castle, Carlow, (the author of "Philitis") had in correspondence with Mr. Piazzi Smyth, in the year 1872, expressed his conviction that, notwithstanding, all that had been written as to the metrology of the Great Pyramid being of more than human scientific perfection for the age in which it was produced, yet to call it, therefore, divinely inspired or sacred, seemed to him either too much or too little. "It might have been sufficient in a previous day, but not in these times in which we live; for with rationalism continually extending on every side, the only vital question left in religion, the only question really sacred is, "What think ye of Christ? Whose Son is He? The question to which we must all of us, sooner or later, come at last." "Now," said Mr. Casey, "unless the Great Pyramid can be shown to be Messianic, as well as fraught with superhuman science and design, its *sacred* claim is a thing with no blood in it." He argued very forcibly that if the first ascending passage was truly intended to indicate prophetically the time from Moses to Christ, and the Gallery, the Christian dispensation; it was hardly conceivable that the builder, if really inspired from on high, should not have known and in some way recorded the interval that was to elapse from the date of the structure to the greatest of all events in human history—the birth of the Son of God. We have already seen that the Pyramid's own memorial date of foundation is 2170 B.C., as astronomically determined by the angle of the entrance passage pointing at midnight of the autumnal equinox in that year to the then polar star. That being so, Mr. Casey inquired whether there was any special feature at that number of inches *back* from the commencement of the Gallery. "So away I

went," says the Astronomer Royal, "to my original notes to satisfy him; and beginning at the north end of the Grand Gallery, counted and summed up the length of every stone backward, all down the first ascending passage, then across the entrance passage to its floor, then up its floor plane towards its mouth, and soon saw that 2170 B.C. would fall very near a most singular portion of the passage — viz., a place where two adjacent wall joints, similarly, too, on either side of the passage, were almost *vertical*, while every other wall joint, both above and below, was *rectangular* to the length of the passage. Neither of these *quasi*-vertical joints, however, would exactly suit the 2170 B.C. date; they were both of them too early. But there was on the surface of the stone, following the last of them, a more unique marking still. This mark was a line, nothing more, ruled on the stone from top to bottom of the passage-wall, at right angles to its floor— such a line as might be ruled with a blunt steel instrument, but by a master hand for power, evenness, and straightness, and exquisitely true. There was such a line on either wall of the passage, and the two lines seemed to be pretty accurately opposite each other. When Mr. Casey required, in 1872, to know exactly where on the floor the line on either side touched the plane, there was no ready prepared record to say. Every intervening measure by joints between the two extremes, and over scores of joints, had been procured, printed, and published to the world in 1867; but just the last item now required, merely the small distance from the nearest joint to the drawn line, was wanting."

"So I wrote out to my friend, Mr. Waynman Dixon, C.E., then actively engaged in erecting his brother's bridge over the Nile near Cairo, requesting him to have

the goodness to make and send me careful measures of the distance, whatever he should find it to be, of the fine line on either passage wall, from the nearest one of the two *quasi*-vertical joints; not giving him any idea what the measure was wanted for, but only asking him to be very precise, clear, and accurate. And so he was; taking out also as companion and duplicate measurer his friend Dr. Grant, of Cairo; and their doubly attested figures were sent to me on diagrams, in a manner which left no room for misunderstanding."

It was only now necessary to deduct these measures from the distances of the nearest joints previously determined, "and," says the Professor, "I was almost appalled, when, on applying the difference, the east side gave forth 2170·5, and the west side 2170·4 Pyramid inches," the difference between the two sides being thus only one-tenth of an inch. Here, therefore, by this hitherto uninterpreted mark or sign, the date of the Pyramid's erection, as astronomically calculated by the angle of the entrance passage, is confirmed, and a Messianic reference established of the most remarkable and convincing character.

Thus we have five supposed principal dates given us in this building, as follow:—

The Flood, B.C. 2527.
The Building of the Great Pyramid by Shem, and probably the Birth of Abraham, B.C. 2170.
The Birth of Moses, or the Exodus, B.C. 1542.
The Birth of Christ, A.D. 1.
The End of this Dispensation, A.D. 1882.

The full length of the entrance passage of the Great Pyramid has not been accurately ascertained by modern measure, the only authority at present being Colonel

Howard Vyse, whose measurements were taken in 1837. Mr. Piazzi Smyth was unable to verify these, by reason of the Arabs, in order to save themselves the trouble of going down such a distance with travellers, having blocked it with sand and stones. But, so far as is known, its entire length from its commencement to its close at the unfinished chamber, which so aptly represents the bottomless pit, is somewhat over 4,400 inches, and would probably be found to represent the same distance of time as is comprised in the three periods of 985 years from the Flood to Moses, 1542 from Moses to Christ, and 1882, the apparent length of this dispensation. During the whole length of this passage, typifying the downward course of the human race, there is but one *actual* way of escape, and that is by the strait and narrow way leading up from nearly its lowest point to the only means of deliverance through the sepulchral aperture representing the death of Christ; "for the Scripture hath concluded all under sin, that the promise by faith of Jesus Christ might be given to them that believe" (Gal. iii. 22). This is the only *legitimate* way, for it is clear that the first ascending passage which was originally blocked with stone, and the entrance to which is still plugged with an immovable block of granite, was only a typical path, showing that "by the deeds of the law there shall no flesh be justified in His sight," which is always true, although men, by their devices, have made a way of their own in that direction. Now, however, that the greater part of the filling-in has been removed, and this once entirely closed passage opened up to view, the typical history of God's ancient people may be traced; for it has been found that at stated intervals the *blocks* forming *separately* the walls, floor, and ceiling of the passage, are

replaced by great transverse plates of stone, with the whole of the hollow or square bore of the passage cut clean through them, the stone plates forming in those places walls, floor, and ceiling, all in one piece. "In the earlier part of the passage, representing the theocratic period of the Hebrew people under their judges," says Mr. Smyth, "these great stone plates are close to one another almost continuously. In the middle of the passage, representing the regal period, David, Solomon, Hezekiah, and other occasional kings acknowledged by God, these surrounding safety-plates appear only at intervals, measuring the same distance as the breadth of the King's Chamber. But when the voice of prophecy was closed with Malachi, then follows the last part of the passage, where, for 400 years and more, there is no reminder of the encircling power of God."

Emerging from this first ascending passage (the lowness of which enforcing a stooping posture, as of a man bending under a heavy burden, appears to illustrate "the bondage of the law"), we come at once into the full liberty of an erect standing in a gallery, seven times the height of the passage, and aptly symbolising, as we have seen, the freedom of the Christian dispensation, "the liberty wherewith Christ has made us free." This should have been to the Jew his proper expectation, all the types and shadows of the past, culminating and finding their expression in the person of the Son of God, at once the sacrifice and priest "who offered Himself without spot to God." For while the law itself, as we are told in Heb. vii. 19, "made nothing perfect, it was the bringing in of a better hope, by the which we draw nigh unto God." So before faith came, the Jew was "kept under the law, *shut up* unto the faith which

should afterwards be revealed (Gal. iii. 23). But the Jews "being ignorant of God's righteousness, and *going about* to establish their own righteousness, have not submitted themselves unto the righteousness of God, for Christ is the end of the law for righteousness to everyone that believeth" (Rom. x. 3, 4).

Had they *then* received Him as their Messiah, the times of refreshing would have come from the presence of the Lord (Acts iii. 19), and they would *then* have been used as the ministers of blessing to the Gentiles; but they rejected and crucified Him; and when after His resurrection He was again presented to the Jew first, they again rejected Him, until, as God had all along foreseen would be the case, they had to be *set on one side*, while the mystery which had been hidden from ages and generations was made manifest, and the church of God, composed of believers in the Lord Jesus Christ taken out from among Jews and Gentiles, was formed.

Now we have already seen (page 51) that the inclined floor of the Grand Gallery at one time joined the floor of the first ascending passage, and thus formed one continuous ascent without break, except as to its enlargement in width and height. A part of the floor, however, at the commencement of the Gallery has evidently at some remote period been removed, as the holes for the stone joists supporting it still remain. The removal of this stone flooring must have brought to light the horizontal passage previously described leading to the seven-sided cubit chamber, or, as it is usually termed, the Queen's Chamber.

We thus appear to have placed before us in symbol the *setting aside* of the Jewish nation during the whole of the Christian dispensation, and *only* during that period, as the south wall of the Queen's Chamber at the

end of this passage is in a direct vertical line with the south wall of the Grand Gallery.

In addition to this, it has been suggested by Mr. Powers, an American student of the Pyramid, that the salt exuding so freely from the walls of the Queen's Chamber and from the horizontal passage leading to it, may be typical of the unchangeable purpose of God towards His ancient people and of His everlasting covenant with them, His "*covenant of salt*" (Num. xviii. 19), a sign and a witness "that the Lord God of Israel gave the kingdom over Israel to David for ever, to him and to his sons by a covenant of salt" (2 Chron. xiii. 5).

When therefore the Church, the heavenly people of God, have been removed—and their removal, as we shall presently see, is indicated at the south end of the Grand Gallery—God will remember His covenant, and gather into one nation the *outcasts* of Israel and the *dispersed* of Judah, and through them minister blessing to the millennial earth, when, in accordance with His promise, David shall be their Prince for ever (Ezek. xxxvii. 24-28). Until that time, however, as our Lord himself says in Matt. xiii. 14, 15, "In them is fulfilled the prophecy of Esaias, which saith, By hearing ye shall hear, and shall not understand; and seeing ye shall see, and shall not perceive: for this people's heart is waxed gross, and their ears are dull of hearing, and their eyes they have closed; lest at any time they should see with their eyes, and hear with their ears, and should understand with their heart, and should be converted, and I should heal them." It may be that the hermetically sealed channels recently discovered in this chamber (described in page 52) have a symbolical reference to the deaf and blind condition of Israel, of whom, again, it is written "that blindness in part is happened to Israel, until the fulness of the

Gentiles be come in. And so all Israel shall be saved." (Rom. xi. 25, 26). But "even unto this day the vail is upon their heart. Nevertheless when it (Israel) shall turn to the Lord, the vail shall be taken away (2 Cor. iii. 15, 16). Then will He call them by their name, in the glorious words of Isaiah xliii. saying: "Bring forth the blind people that have eyes, and the deaf that have ears." "In that day shall the deaf hear the words of the book, and the blind shall see out of obscurity and out of darkness." "The eyes of the blind shall be opened, and the ears of the deaf shall be unstopped." "And the ransomed of the Lord shall return, and come to Zion with songs, and everlasting joy upon their heads; they shall obtain joy and gladness, and sorrow and sighing shall flee away" (Isa. xxix. 18, and xxxv. 5-10).

There is, without doubt, other typical instruction to be gleaned from other peculiarities of this chamber and passage, which I stay not to inquire into fully now. Its seven sides, formed by the double inclined slope of the ceiling, the four walls, and the floor (the last being larger in area than the rest), may have reference to the sabbatical rest Israel will enjoy during the 1,000 years of the reign of Christ, the seventh millenary from the creation of the world; and to their sevenfold blessing, as foretold in Isa. xxx. 26, when "the light of the moon shall be as the light of the sun, and the light of the sun shall be sevenfold, as the light of seven days, in the day that the Lord bindeth up the breach of His people, and healeth the stroke of their wound."

Again, it will be remembered that the horizontal passage leading to this chamber is, at its commencement, open to the Grand Gallery for one-seventh of its length, then for five-sevenths is reduced to the dimensions of the first ascending passage, and then during the last

seventh of its course is increased in height by a drop in the floor, which enables a person to stand almost upright in it. It may be that, if, as we suppose, the horizontal passage, as indicated by the roughness of its floor, is not intended by its length to give forth time in an inch to the year, like the other passages; yet, if its whole course is intended to represent the course of the Jewish people in their dispersion during the same period of time as is occupied by the Christian dispensation, then the middle period, where the passage is lowest, is indicative of the oppression and persecution they then suffered; while the last seventh of the period is illustrative of the enlargement of their condition, and the relaxation of the oppressive laws that had for so long a period been enforced against them, culminating in their return to their own land in unbelief, where after the most awful judgments a remnant will be saved, and the final restoration of the whole twelve tribes eventually brought about by Jehovah in accordance with His Word.

Having thus considered the lessons to be learned from the lower passages and chambers, we must now return to the Grand Gallery, at the commencement of which we have already seen indicated, in an inch to a year, the date of Calvary in our Lord's life. The sepulchral chasm exhibiting this has been formed by the upheaving from below of one of the ramp stones. These ramps or benches, on either side of the gallery (as described at page 21), are about 21 inches high and 20 inches wide, forming a higher platform on which to walk than the middle way of the passage. If, therefore, we get the resurrection of Christ shown by the forcible opening of this tomb-like shaft, removing one of the ramp stones, we may associate the ramps themselves with the pathway of those who have been "chosen out

of the world," and who are not of the world even as Christ is not of the world (John xv. 19; xvii. 16). And this would seem to be further illustrated by the holes cut in the stone on the top of these benches, at almost regular intervals from the very north end of the gallery to its extreme south on the step, which in their proportions are like so many symbolic graves, every one of which is open, setting forth, it may be, the heavenly standing in resurrection life of all true Christians, as having been buried with Christ "by baptism into death, that like as Christ was raised up from the dead by the glory of the Father, even so they also should walk in newness of life" (Rom. vi. 4), and who, having in the person of their glorious Substitute been judicially dealt with on account of their sins, have the world, and death, and the grave under their feet, and fear no future judgment. So we read in Ephesians ii.: "And you hath He quickened, who were dead in trespasses and sins; wherein in time past ye walked according to the course of this world, according to the prince of the power of the air, the spirit that now worketh in the children of disobedience; among whom, also, we all had our conversation in times past, in the lusts of our flesh, fulfilling the desires of the flesh and of the mind; and were, by nature, the children of wrath even as others. But God, who is rich in mercy, for His great love wherewith He loved us, even when we were dead in sins, hath quickened us together with Christ (by grace ye are saved), and hath raised us up together, and made us sit together in heavenly places in Christ Jesus, that in the ages to come He might show the exceeding riches of His grace in His kindness towards us through Christ Jesus."

Of these ramp holes, or open graves, there are 28 on either side, in all 56, or eight times seven; seven

being in Scripture the number of fulness, perfection, and completion, and eight that of resurrection and newness of life; so that here, again, we get the finished work of Christ set forth in connection with His resurrection from the dead, and our association with Him in newness of life, as it is written, "Ye are complete in Him. Ye are risen with Him" (Col. ii. 10—12).

It has already been shown that the seven overlappings of the walls of this passage were probably intended to symbolise the seven stars of the Pleiades, the chief star of which group (Alcyone) is now supposed to be "the centre of gravity of our vast solar system—the luminous hinge in the heavens round which our sun and his attendant planets are moving through space." ("Bible Teachings in Nature," Macmillan.) So Coverdale renders Job xxxviii. 31: "Hast thou brought the seven stars together, or art thou able to break the circle of heaven?" The seven overlappings of the walls may, however, have a further signification, as we find in the first three chapters of the Book of Revelation that the whole of the Christian dispensation is symbolised by seven golden candlesticks and *seven stars*, which are held in the right hand of Him who walks in the midst of the seven candlesticks, which are explained to be seven churches—these seven churches being indicative of the various stages of the professing Church of Christ throughout the entire dispensation from Pentecost to its final Laodicean state.

That there is some spiritual signification in the 36 roof stones (12 × 3) of the Grand Gallery, I doubt not, but I can offer no solution of their meaning; nor am I able to give any explanation of the meaning of the great step 36 inches high, which, at a distance of 1813 pyramid inches from the commencement of the Gallery, lands us

on a horizontal platform. About 68 inches beyond this, 1881·4 inches from the north wall, we are brought to the south wall of the Grand Gallery, which is not perfectly vertical, but leans or overhangs its base by about one degree, as if it might fall at any moment; the length of the gallery along a certain intermediate part between floor and ceiling, marked once by a shallow groove, being 1878·4 pyramid inches. But immediately before us is a distressingly low passage, lower than any of the previous passages, being only 43·6 inches high, but of the same width (41 inches) as the first ascending passage, and as the middle passage way of the Grand Gallery; while overhead at the upper south-east corner of the Gallery, 28 feet above the heads of all travellers below, and utterly beyond the reach of any but winged beings, is a small concealed passage-way, leading to a sort of sanctuary over the ceiling of the King's Chamber, evidently not fitted for persons with ordinary powers of locomotion, as "the floor is all up and down in huge knobs of granite, and the height too small; but the ceiling of it is exquisitely smooth and true in polished red granite, and of the same length and breadth as the ceiling of the King's Chamber below."

To the Scripture student the symbolical meaning of all this will be soon apparent. The Lord Jesus has set before His redeemed people one hope—the bright and and glorious expectation of His return: "I will come again," said He, "and receive you unto myself." "The Lord Himself shall descend from heaven with a shout, with the voice of the archangel and the trump of God, and the dead *in Christ* shall rise first; then we which are alive and remain shall be caught up together with them in the clouds to meet the Lord in the air, and so shall we ever be with the Lord" (Thess. iv.). Over and

over again throughout the New Testament Scripture is this coming again of our blessed Lord and Master reiterated as the one object which is to occupy the heart of His elect, the day and hour of which is known to none but God, but for which His people are ever to be on the watch, like unto men that wait for their lord whether he come "at even, or at midnight, or at the cock-crowing or in the morning." This then appears to be the meaning of the *impending* wall and upper exit passage as plainly as it can be set forth in stone, and only stone; the next great *impending* event for the church of Christ being His descent into the air to raise His sleeping saints and change His living saints, and receive them together to Himself, as symbolised by the secret way of escape leading to the retreat over the King's Chamber. How soon this may occur we know not, but we have certain indications given us in the Word of God whereby we may know that "it is near even at the doors" (Matt. xxiv. 33), and these indications seem to be now thickly gathering around us. While the Scripture purposely leaves the exact date uncertain, so does the Pyramid, if our theory of interpretation be correct. Up to the measure of 1813 inches of the Grand Gallery we have an *ascending* floor line to measure, then a step 36 inches high, then a level passage for the remaining 68 inches, while, as we have seen, along a marked groove in the wall the measure is 1878·4. But taking the floor line as the measure for computation, we have 1881.4 (that, is 1881 complete inches and nearly half of the 1882nd), or about the middle of A.D. 1882 as the probable end of the present dispensation. While, however, *we* as Christians are to be "looking for that blessed hope, and the glorious appearing of the great God and our Saviour Jesus Christ," what do we find in Scripture is to

transpire on *earth* about the time when the Church of God is to be caught up to meet the Lord. "Then," we read, "shall be great tribulation, such as was not since the beginning of the world to this time, no, nor ever shall be, and except those days should be shortened there should no flesh be saved" (Matt. xxiv. 21, 22); and the unexampled troubles of these times are pyramidally expressed here "by the exit passage from the south end of the Grand Gallery being lower still than any of the low passages which marked the troubles of the profane or Jewish world in early times." This passage is, however, only 53 inches long, of which I judge 50 inches should be taken as the thickness of the doorway (just as in the entrance to the King's Chamber 100 inches is the thickness of that doorway), leaving only about 3 inches or thereabouts to be counted as the number of years of this unutterable anguish, which would bring us to the middle or end of A.D. 1885.

This too is in accordance with Scripture, which speaks of this time variously as 1,260 days, 42 months, and a time, times and half a time, or three-and-a-half years. It would appear too as if the last half week of Daniel's 70 weeks must yet have its fulfilment in connection with the coming Antichrist, the thread of prophecy concerning Israel having been broken by their rejection of their Messiah after the sixty-ninth week, to be resumed only when the Church of this parenthetical dispensation is removed, and God's ancient people are once more found in their land (Dan. ix. 25-27).

In addition to this, and confirmatory of the near approach of the end, is the fact that the "times of the Gentiles" must have nearly run their course (Luke xxi. 24). These *times* commenced when the God of Heaven gave to Nebuchadnezzar, as the head of gold

and the representative of the whole of the great image described in Daniel ii., "a kingdom, power and strength and glory, and wheresoever the children of men dwell, the beasts of the field, the fowls of the heaven, hath He given into thine hand, and hath made thee ruler over them all." And it was at about the same time that Ezekiel saw the glory of God depart from the Temple, where it was never again seen, indicative of God having then vacated His throne as Israel's King. This must have been about the year B.C. 602 to 598. If we further take the *seven times* of Nebuchadnezzar's bestial debasement as typical of the chronological duration of the Image, with the understanding that a "time" of years signifies 360 years (even as a "time" of days is 360 days), we have 2,520 prophetical years of 360 days each, from which in order to reduce them to natural years 36 must be deducted, leaving 2,484 years as the duration of the "times of the Gentiles." These "times," commencing at about 602 to 598 B.C., will be finally brought to a close somewhere near the years A.D. 1882 to 1886. If, however, the 2,520 years are to be taken as natural years, we must add in the height of the great step 36 inches, which would bring us to the year 1918; but I incline to think that the first interpretation is correct.

The Lord Jesus having previously gathered His saints to meet Him in the air, "shall be revealed from Heaven with His mighty angels, in flaming fire, taking vengeance on them that know not God, and that obey not the gospel of our Lord Jesus Christ, who shall be punished with everlasting destruction from the presence of the Lord, and from the glory of His power" (2 Thess. i. 7-9). Having slain the antichristian host, and taken Antichrist (or the beast), and the false prophet, and cast them alive into a lake of fire burning with brimstone, the

dragon or Satan is chained and shut up in the bottomless pit for a thousand years (Rev. xix., xx). Being thus by conquest, as well as by right, the only one worthy to receive power, God will set Him as King on His holy hill of Zion, and He will take to Himself His great power, and reign as "King of kings and Lord of lords."

Then will commence His thousand years' reign with His saints, Jerusalem being the metropolis of the whole earth and the centre of blessing, "for out of Zion shall go forth the law and the word of the Lord from Jerusalem," "and the earth shall be full of the knowledge of the Lord as the waters cover the sea." But this will not be the final or eternal state, for there will still be sin and death, although greatly mitigated and held in check by the King, who shall reign in righteousness, during which time the days of a man will be as the days of a tree, righteousness will be the rule, and sin the exception.

This period is symbolised by the remarkable Antechamber, where granite, indicative of perfection and durability, greatly predominates, but where limestone, the more perishable material, is also found, although in but small quantity. Here, too, at the outset must every one who enters this chamber bow submissively under that overhanging granite portcullis, only 43·6 inches high, on which is the pyramid standard of number, weight, and measure, the symbol of truth and righteousness. So, during the reign of the Righteous King, shall every one be compelled to submit themselves to Him; and even the haters of the Lord, His enemies, shall, through the greatness of His power, yield feigned obedience, and bow before Him, and lick the dust (Ps. lxvi. 3; lxxii. 9; lxxxi. 15).

At the end of this thousand years (during which man will have been tried, under the most favourable circum-

stances,without a tempter), Satan will be loosed out of his prison, and, finding the heart of man, as ever, ready to believe a lie, will make his final attempt against God by gathering an innumerable host to compass the destruction of His beloved city, the earthly Jerusalem. The battle, however, is short, sharp, and decisive. Fire will come from God and devour them, and the devil himself be finally and for ever cast into the lake of fire and brimstone.

Then will come the final judgment of the great white throne. The grave will deliver up the bodies of the wicked dead; Hades will deliver up their spirits, and they will stand, small and great before God, in the person of His Son, to whom the Father has committed all judgment. Only those, however, who have not accepted Him as their Saviour will stand before Him as their Judge (for there is no condemnation to them that are in Christ Jesus), and nothing being found to justify them, they are cast into the lake of fire (Rev. xx.).

After this the eternal state commences, symbolised, as it seems to me, by the marvellous King's Chamber, perfect in its dimensions and of granite throughout, entered from the Ante-chamber by the narrow passage-way of 100 inches in length, with the Coffer, emblem of the eternal truth of God—who is the same yesterday, and to-day, and for ever—standing on its floor. It is at this period that a new heaven and a new earth is brought to view. The Holy City, the New Jerusalem comes down from God out of heaven, as it were to crown the earth, and "the Tabernacle of God is with men, and He will dwell with them, and they shall be His people, and God Himself shall be with them, their God. And God shall wipe away all tears from their eyes, and there shall be no more death, neither sorrow nor crying, neither shall there be any more pain; for the former things are passed away" (Rev. xxi.).

This is more than Paradise restored. *There* God *walked* with man, *here* He *dwells* with him. The tree of life restored is in the midst of this Paradise of God; the water of life proceeds out of His throne, while no tempter, nor anything that defileth or worketh abomination, or maketh a lie, can in any wise have access there.

But let us, ere we close, consider what will be the probable appearance of that great city, the holy Jerusalem, which will descend out of heaven from God. "Having the glory of God, and her light like unto a *stone* most precious, even like a jasper stone, clear as crystal," with a wall great and high, and twelve gates, and twelve foundations or foundation stones. "The City," we are told, "lieth four square, and the length is as large as the breadth; and he measured the city with the reed, 12,000 furlongs. The length and the breadth and the height of it are equal" (Rev. xxi. 11-16). But it is not therefore a cube, which would give no idea of beauty, and around which there would be no need nor place for a wall only 144 cubits in height. The only other shape having a square base which would answer to this description, and which would give it more the appearance of a "stone most precious," would be that of a Pyramid, and I am glad to be able to close this paper with an extract from a writer in the "Golden Lamp," vol. iv., p. 219, who, so far as I am aware, has no thought of the Pyramid of Egypt in connection with his subject. He says: "As to the shape and form of this city, the metropolis, and royal centre of the earth, we cannot pretend to any degree of certainty; but from the description it would seem to be material, to be in the form of a lofty pyramid, of which the height to the top stone shall be the same as the length of the side of its base, and the total circumference about a thousand miles,

roughly estimated. Around the base of this God's holy hill will stand the great wall, about 300 feet in altitude, in which will be set the pearl gates always open. The top stone, the chief corner-stone, will crown the pyramidal city, and forming thus the centre in which all its lines shall meet, will, with exquisite suitability, form the material representation and glorious monument of the exalted Living Stone, which once the builders rejected, but which shall then become and be manifested before all the redeemed earth and ransomed universe as the Head of the Corner."

Thus have we traced the history of the marvellous edifice of the Great Pyramid of Egypt, and endeavoured to gather up some of its lessons. Whatever objections may be urged against it, there can be no question that in its design, shape, and construction, external and internal, such remarkable coincidences are presented as to leave no doubt upon an unbiassed mind that they are the result of a deep and settled purpose. And even if, in endeavouring to translate its meaning, we may have failed fully to grasp it, it cannot be denied that this sermon in stone has an interest peculiar to itself, and its parabolic teachings are fraught with both scientific and Scriptural truth. In its present state, bereft of its topstone, it seems to show the need this poor world has of a king, in whom shall centre the needful wisdom and power to set all things right, while at the same time we learn how man, as man, will treat God's truth, of which this is the emblem, when committed to his keeping. Stripped of its beauty, marred and defaced, its topstone gone, its coffer chipped, its stones ill-treated, it yet utters its voice in such tones of truth as stones have never spoken out before. The very ruin wrought by man in the way he has made for himself into its upper passages and

chambers, has its instruction for us, showing how, instead of submitting to the righteousness of God, he has gone about to establish his own righteousness; and, again, by the choking with rubbish of the passageway to the chamber which so aptly represents the bottomless pit, we are reminded how he would like to deceive himself into the belief of the non-existence of the place, and the non-eternity of the punishment. "The fool hath said in his heart, There is no God."

Much more might be said on this deeply interesting subject, but if this building be of God, He will, in due time, make it manifest. In the meanwhile, we look forward with joyful expectation to the coming time, when "truth shall spring out of the earth, and righteousness shall look down from heaven" (Psa. lxxxv. 11), and the redeemed Church, the true building of God, shall be crowned with its head and chief corner-stone, which shall be brought forth with shoutings of—

"GRACE, GRACE UNTO IT."

Grace! 'tis a charming sound,
Harmonious to the ear;
Heaven with the echo shall resound,
And all the earth shall hear.

Grace first contrived the way
To save rebellious man;
And all the steps His grace display,
Who drew the wondrous plan.

Grace led our wandering feet
To tread the heavenly road,
And new supplies each hour we meet
While pressing on to God.

Grace all the work shall crown
Through everlasting days;
IT LAYS IN HEAVEN THE TOPMOST STONE,
AND WELL DESERVES THE PRAISE.

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